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THE WORKING PARTY ON CHEMICALS, PESTICIDES AND BIOTECHNOLOGY**

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**INTEGRATED SUMMARY REPORT: Validation of Two Binding Assays Using Human Recombinant
Estrogen Receptor Alpha (hrERa)**

**Series on Testing & Assessment
No. 226**

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This document includes appendices G to L of the report.



INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS

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FOREWORD

This document is Annex 2 of the Integrated Summary Report (ISR) of the Validation of two binding assays using human recombinant estrogen receptor alpha (hrER α). It includes appendices G to L of the report.

This document is published under the responsibility of the Joint Meeting of the Chemicals Committee and the Working Party on Chemicals, Pesticides and Biotechnology of the OECD.

**Follow-Up Data Analysis Support for Human Recombinant Estrogen
Receptor Validation Study**

Statistical Analysis

U.S. Environmental Protection Agency

May 30, 2013

BATTELLE

505 King Avenue

Columbus, Ohio 43201

Overview

Under USEPA contract number EP-W-06-32, Work Assignment 5-2, Technical Directive 24, Battelle Memorial Institute's Data Coordination Center for the EPA's Endocrine Disruptor Screening Program analyzed data from an interlaboratory validation study of two receptor binding assay protocols FWA and CER1 using human recombinant estrogen receptor (hrER). A final report was delivered to EPA in December of 2011.

In technical directive 6 (TD6), EPA has requested to have two additional analyses done based on the same datasets and techniques that were used in the December 2011 report: **Task 1** is to construct tolerance intervals for logIC₅₀ for 17 β -estradiol (E2) and norethynodrel (NE) (competitive binding positive controls); **Task 2** is to use the techniques and assumptions from the previous analysis for norethynodrel to derive tolerance bounds for top, bottom, hillslope, logIC₅₀, and log (Relative Binding Affinity) for norethindrone. These two analyses were performed for both the CER and FWA protocols. Unless specified otherwise, "log" denotes base 10 logarithm throughout the entire report.

Methods

Task 1

Methods for constructing the tolerance intervals for logIC₅₀ are same as those discussed in the December 2011 report. The logIC₅₀, along with top, bottom, hillslope and Syx, was estimated for each test run for both E2 and NE using Prism in the December analysis. The estimated values and the associated standard errors for logIC₅₀ are those presented in the December 2011 report under the same assumption. The tolerance intervals were applied to parameter estimates for the acceptable E2 and NE runs respectively. In the December 2011 report, tolerance intervals were derived for top, bottom, and hillslope using the parameter estimates of the acceptable runs. This task is to use the same approaches to derive the tolerance intervals for logIC₅₀ using the parameter estimates from the same acceptable runs.

Task 2

Methods for deriving the tolerance intervals for the tolerance intervals for top, bottom, slope, logIC₅₀, Syx and log(Relative Binding Affinity) for norethindrone are same as those used for norethynodrel. The log(Relative Binding Affinity) was calculated using the same formula as in the December 2011 report, replacing the weak positive chemical norethynodrel with norethindrone.

The relevant datasets for norethindrone are from CeeTox and the University of Missouri, in their "Subtask 4" submissions. (Subtask 4 involved testing coded chemicals. In the DCC's Dec. 2011 report, norethindrone's code was translated to the abbreviation "Nethdrone" in file names. Norethindrone was submitted as four separate samples, which were decoded as Nethdrone 1 (or Nethdrone), Nethdrone 2, Nethdrone 3, and Nethdrone 4.) There are also relevant data from the Dietrich laboratory for FWA protocol, under "Task III" (also abbreviated "Nethdrone" in datasheets.) Under this task, the 10% rule was applied to the norethindrone test runs. The 10%

rule is programmed in the excel data templates. Thus by examining the output data sheet in each norethindrone runs, the runs affected by the 10% rules were determined, where the 10% rule affected data values appeared in the output block "B/B0(%), all usable values" but not in the output block "B/B0(%), values 10% higher than curve's min excluded if at higher concentration". Then the Prism fits for these affected runs were rerun by excluding the affected data. The Prism fit templates from the December 2011 analysis were used for the refitting by simply excluding the affected data in the datasheet within the Prism templates. Then the parameter estimates from the previous Prism fits (if the test runs were not affected by the 10% rule) and the Prism refits (if the runs were affected by the 10% rule) were used for deriving the tolerance intervals for top, bottom, slope, logIC50, Syx and log(Relative Binding Affinity) for norethindrone. The tolerance intervals were derived using the test runs that were acceptable for both E2 and NE.

Results

Statistical analyses were conducted as discussed in the method section for task 1 and task 2. The results are presented in this section.

Task 1

The tolerance intervals were calculated for the logIC50 for E2 and NE and the results are presented in Table A1. The tolerance intervals for top, bottom, hillslope, as derived in the December 2011 analysis (Table 8 of the December 2011 report) are also shown in these tables. The parameter estimates for logIC50 for each test run, including both the acceptable and unacceptable runs were displayed in Figures A1 through A4 with the tolerance bounds as the references lines. The acceptable and unacceptable runs are distinguished with different symbols. The tolerance intervals are used to screen the test runs and the runs with parameter estimates below or above the tolerance limits are indicated (Tables B1 through B4).

Task 2

All norethindrone test runs are listed in Table B5, including the status of whether the test runs are affected by the 10% rule and the concentration levels that are affected by the 10% rule. The parameters estimates presented in Table B5 are those presented in the December 2011 report where the 10% rule was not applied to. All norethindrone test runs for the CERI protocol from University of Missouri are affected by the 10% rules, and these are the only norethindrone test runs that are affected by the 10% rule for both the CERI and FWA protocols. The Prism refits for the CERI norethindrone test runs from the University of Missouri are included in the Appendix C and the parameter estimates from the Prism refits are presented in Table B6.

The tolerance intervals were calculated for top, bottom, hillslope, logIC50, Syx and log(Relative Binding Affinity) for norethindrone for each protocol after applying the 10% rule. The results for top, bottom, hillslope, logIC50 are added to Table A1, and the results for log(Relative Binding Affinity) and Syx presented in Tables A4 and A5. The tolerance intervals for Syx (both E2 and NE) and log(RBA) (with weak positive NE), as derived in the December 2011 analysis (Tables 9 and 10 of the December 2011 report) are also shown in these tables. The parameter estimates for each test run, including both the acceptable and unacceptable runs are

displayed in Figures A5 through A16 with the tolerance bounds as the references lines. The acceptable and unacceptable runs are distinguished with different symbols. Each figure is prepared for one parameter for a given protocol. The tolerance intervals are also used to screen the test runs and the runs with parameter estimates below or above the tolerance limits are indicated (Tables B6 and B7).

Table A1. hrER α Competitive Binding Assay Performance Criteria: Tolerance Intervals to Contain at Least 80% of Population of Test Runs with 95% Confidence for Top, Bottom, HillSlope and LogIC50 Parameters for the Reference Chemical (E₂), Weak Positive (NE) and Norethindrone (Nethdrone). Calculated Using Acceptable Runs.

Protocol	Chemical	Parameter	Average Estimate	Std Error Estimate	Lower Limit	Upper Limit
CERI	E ₂	Top	107.83	4.06	56.34	159.33
		Bottom	1.05	0.59	-4.76	6.87
		HillSlope	-1.20	0.04	-2.26	-0.14
		LogIC50	-8.93	0.08	-9.57	-8.28
	NE	Top	103.71	2.88	67.45	139.97
		Bottom	2.48	1.02	-9.67	14.63
		HillSlope	-1.02	0.03	-1.78	-0.27
		LogIC50	-6.18	0.12	-7.19	-5.17
	Nethdrone	Top	96.67	0.20	88.40	104.95
		Bottom	7.14	1.61	-6.68	20.96
		HillSlope	-0.93	0.03	-1.54	-0.32
		LogIC50	-5.95	0.33	-9.08	-2.82
FWA ^a	E ₂	Top	101.60	0.92	89.14	114.05
		Bottom	0.32	0.21	-1.36	2.01
		HillSlope	-1.02	0.04	-1.91	-0.13
		LogIC50	-8.85	0.04	-9.20	-8.50
	NE	Top	101.15	2.01	76.83	125.47
		Bottom	2.23	0.73	-5.42	9.89
		HillSlope	-0.96	0.04	-2.05	0.13
		LogIC50	-6.32	0.07	-6.84	-5.80
	Nethdrone	Top	90.23	4.92	51.25	129.21
		Bottom	3.33	2.07	-13.43	20.08
		HillSlope	-1.29	0.11	-4.00	1.41
		LogIC50	-5.92	0.17	-7.45	-4.37

a. DMSO runs were not included in the tolerance interval calculation.

Table A2. hrER α Competitive Binding Assay Performance and Data Interpretation Criteria Tolerance Interval to Contain at Least 80% of Population of Test Runs with 95% Confidence for base 10 Log-Transformed Relative Binding Affinity (RBA, and Norethindrone (Nethdrone) RBA). Calculated Using Acceptable Runs.

Protocol	Parameter	Average Estimate	Std Error Estimate	Lower Limit	Upper Limit
CERI	logRBA	-2.75	0.08	-3.40	-2.10
	logRBA (nethdrone)	-3.086	0.08	-3.78	-2.39
FWA	logRBA	-2.53	0.08	-3.19	-1.88
	logRBA (nethdrone)	-2.93	0.21	-4.82	-1.04

Table A3. hrER α Competitive Binding Assay Performance and Data Interpretation Criteria One-sided Upper Tolerance Limit to Contain at Least 80% of Population of Test Runs for Precision Parameter for Standard, Week Positive, Norethindrone (Nethdrone) Curve with 95% Confidence. Calculated Using Acceptable Runs.

Protocol	Chemical	Mean Ln(Syx) ^a	Std Error Mean Ln(Syx)	Upper Limit Ln(Syx)	Geometric Mean Syx	Geometric Std Error Syx	Upper Limit Syx
CERI	E2	1.60	0.26	2.92	4.93	1.30	18.60
	NE	1.43	0.22	2.59	4.17	1.24	13.29
	Nethdrone	1.71	0.065	2.14	5.51	1.07	8.51
FWA	E2	1.42	0.19	2.49	4.13	1.21	12.09
	NE	1.39	0.14	2.21	4.02	1.15	9.13
	Nethdrone	1.72	0.07	2.17	5.58	1.07	8.76

a. Ln(Syx) is natural log-transformed Syx.

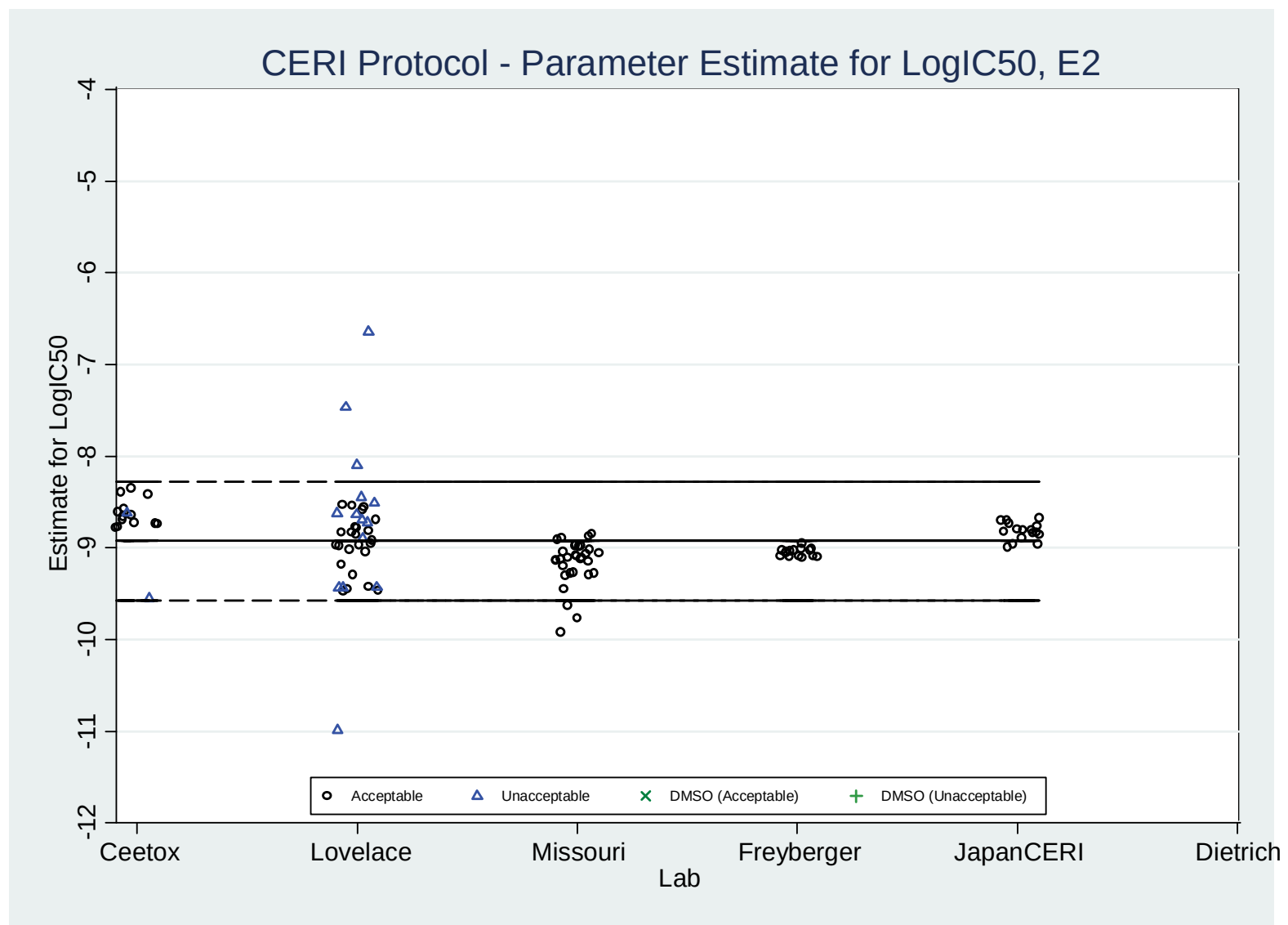


Figure A1. Parameter Estimates and Tolerance Intervals for LogIC50 for the Reference Chemical (E₂) for CERI Protocol.

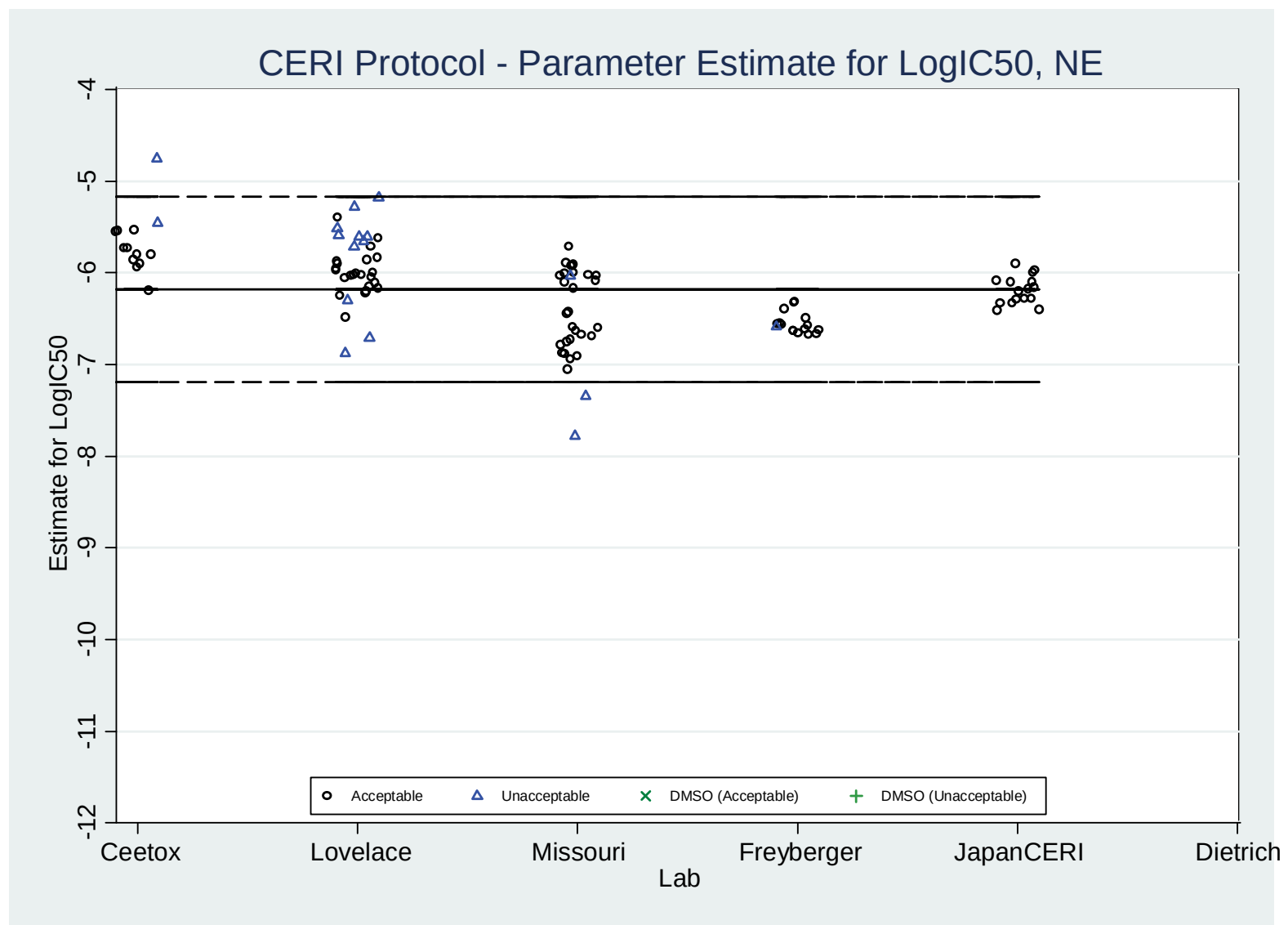


Figure A2. Parameter Estimates and Tolerance Intervals for LogIC50 for the Weak Positive (NE) for CERI Protocol.

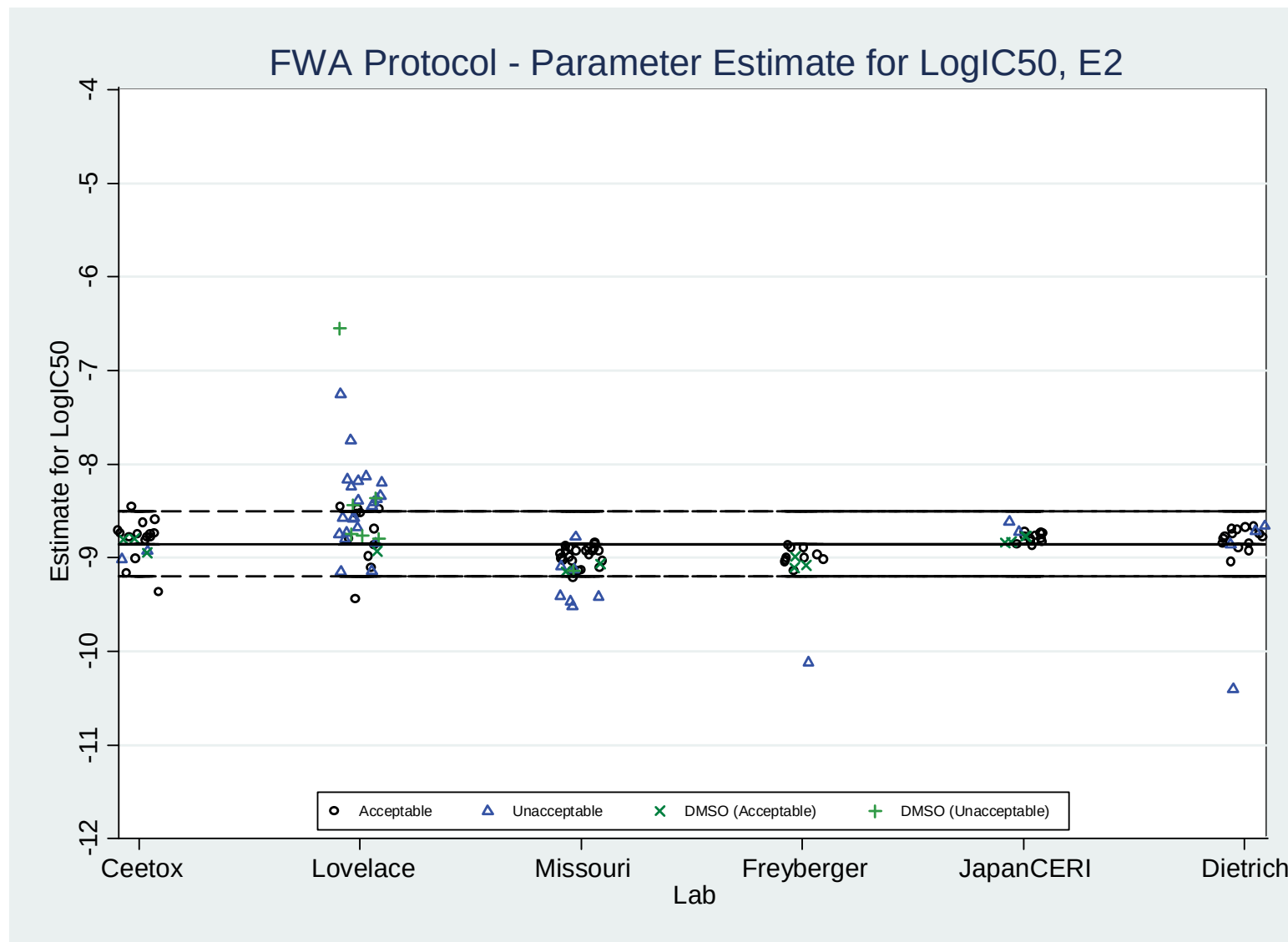


Figure A3. Parameter Estimates and Tolerance Intervals for LogIC50 for the Reference Chemical (E₂) for FWA Protocol.

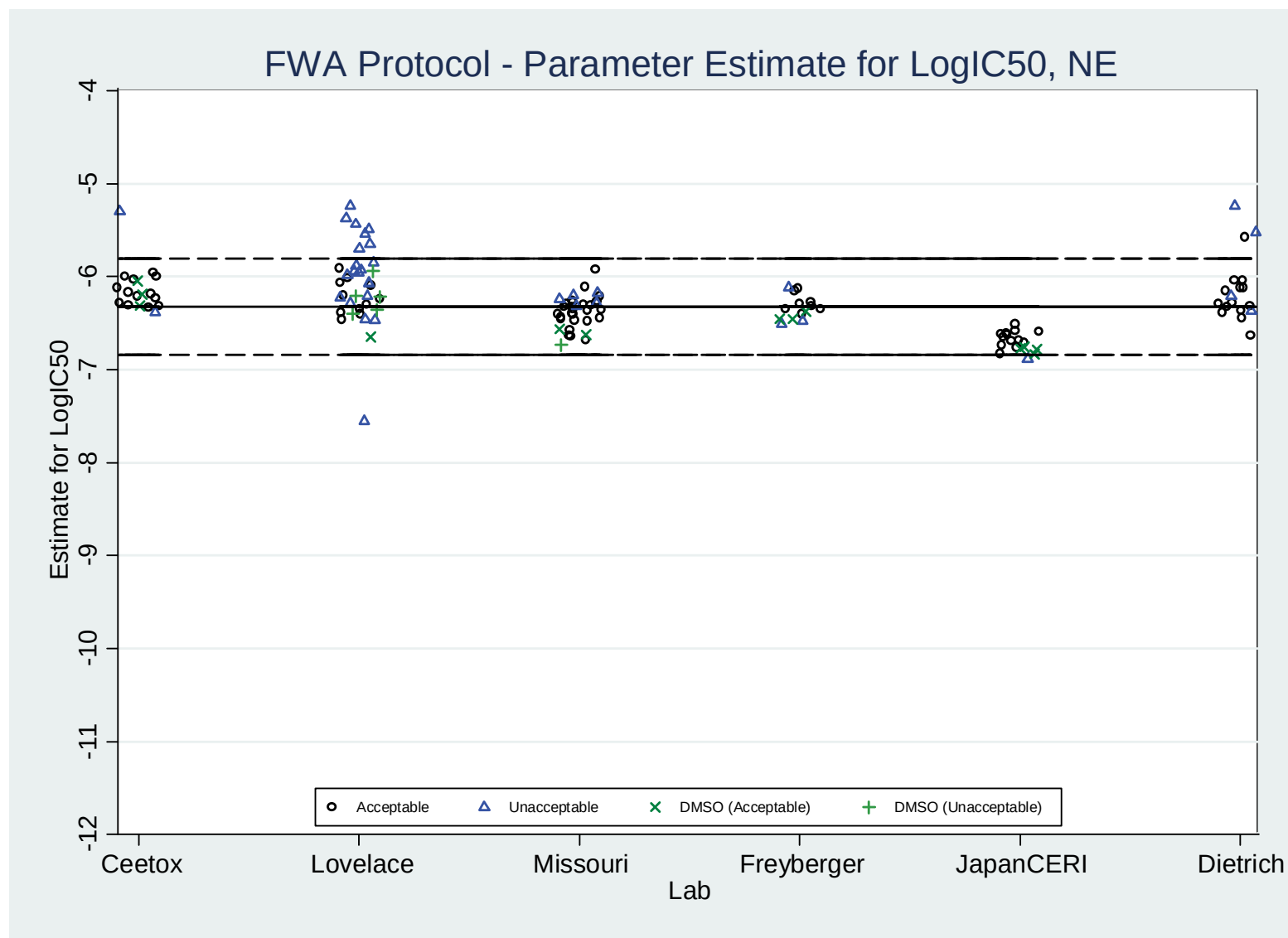


Figure A4. Parameter Estimates and Tolerance Intervals for LogIC50 for the Weak Positive (NE) for FWA Protocol.

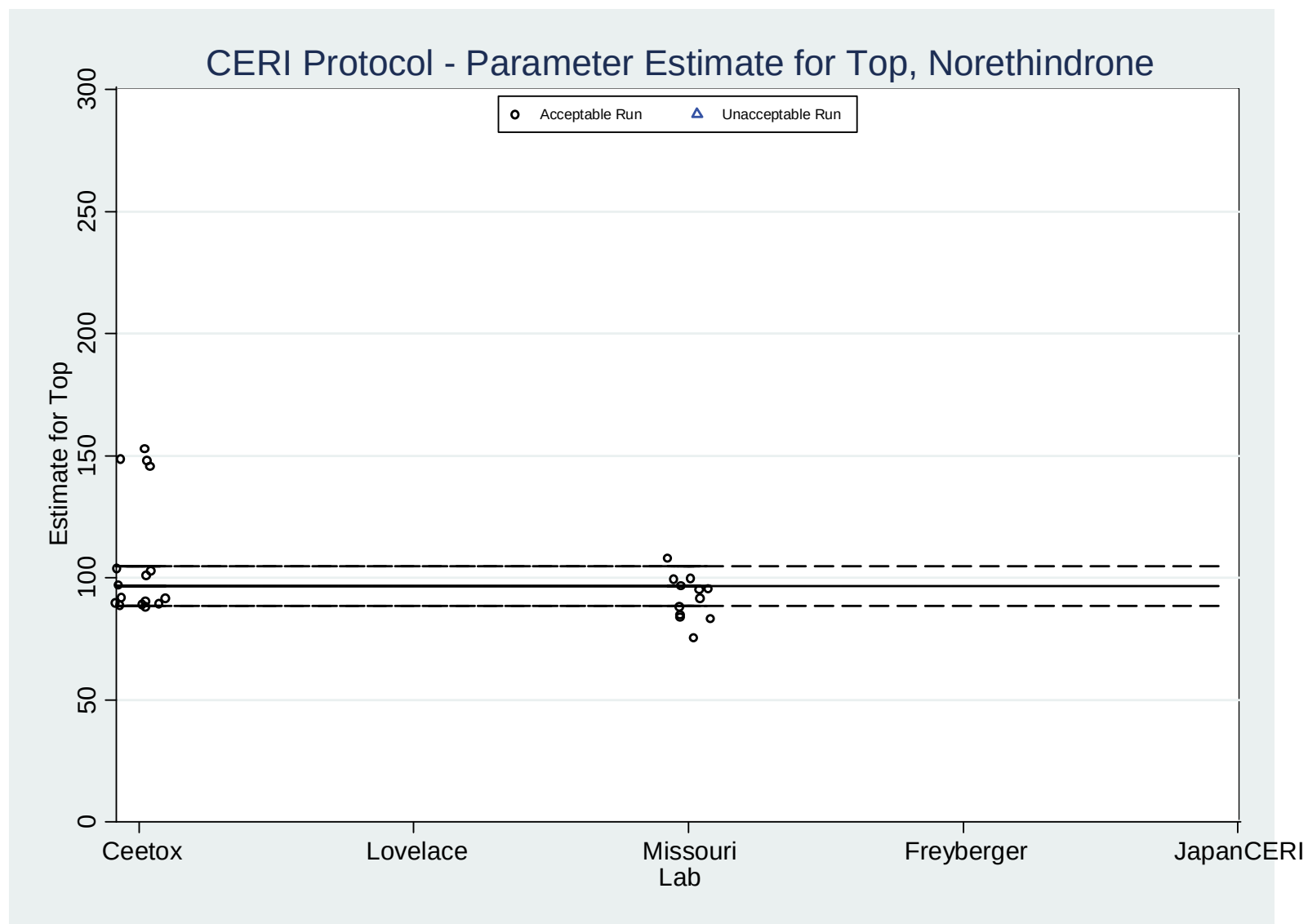


Figure A5. Parameter Estimates and Tolerance Intervals for Top for the Norethindrone (Nethdrone) for CERI Protocol.

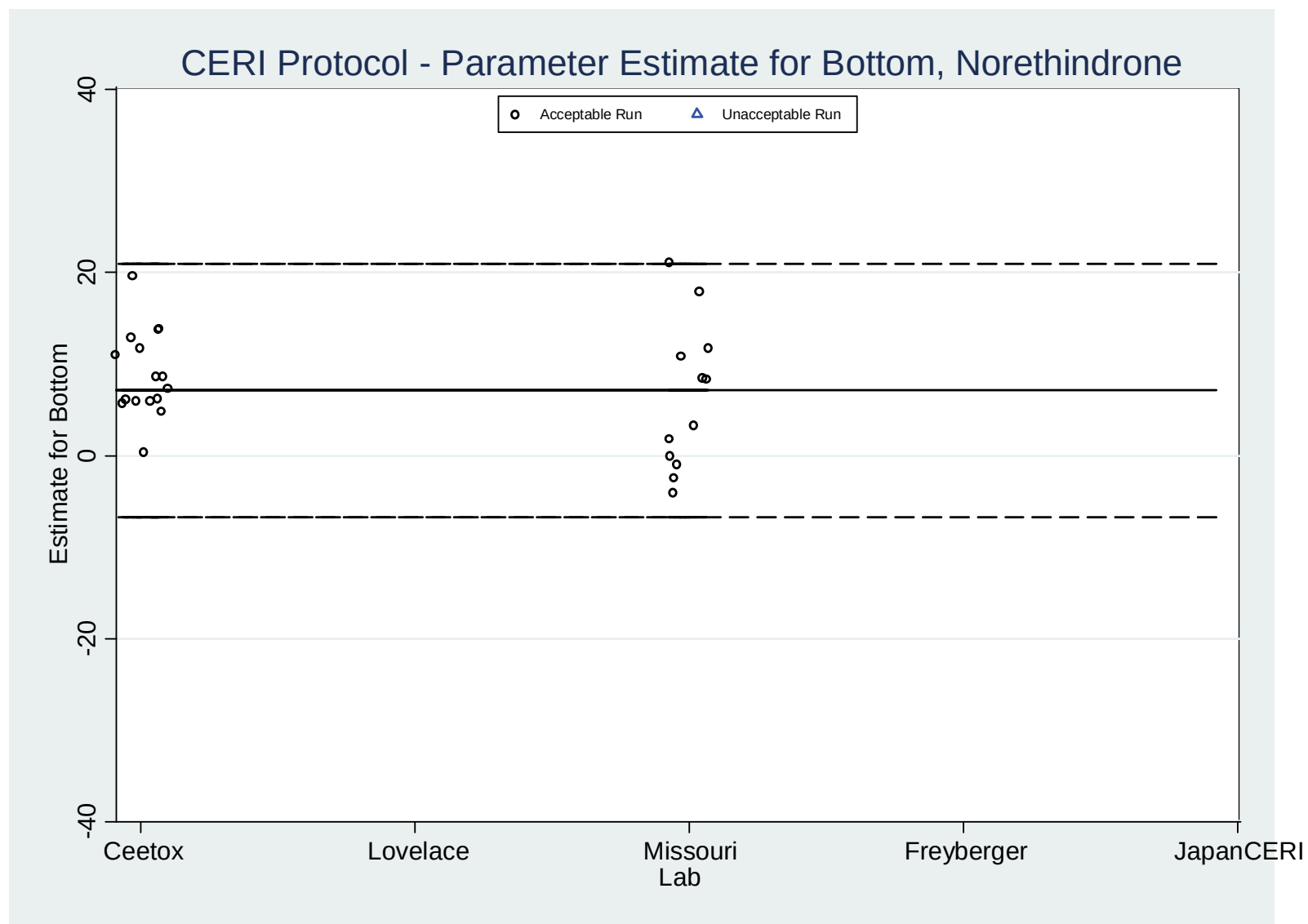


Figure A6. Parameter Estimates and Tolerance Intervals for Bottom for the Norethindrone (Nethdrone) for CERI Protocol.

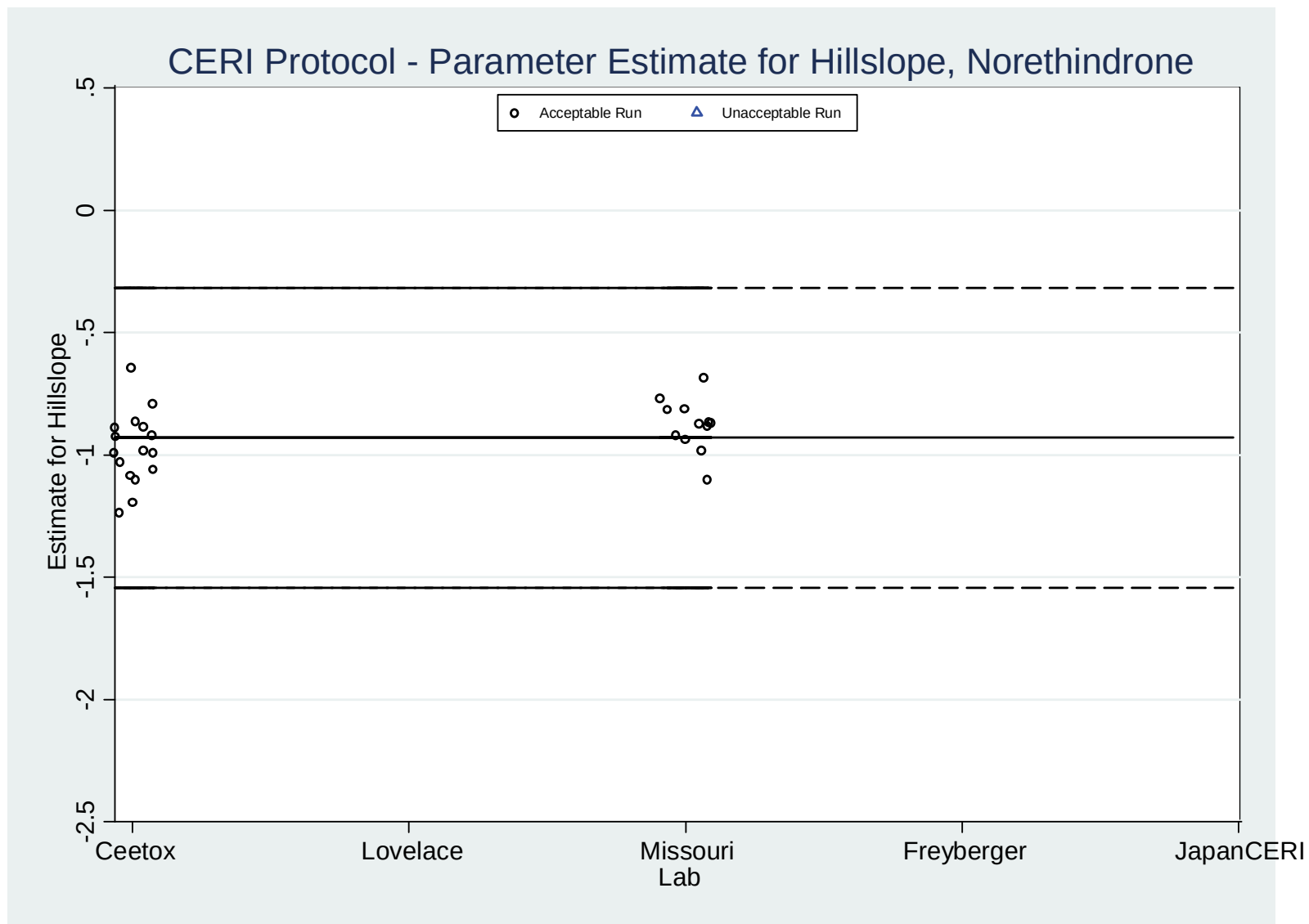


Figure A7. Parameter Estimates and Tolerance Intervals for Hillslope for the Norethindrone (Nethdrone) for CERI Protocol.

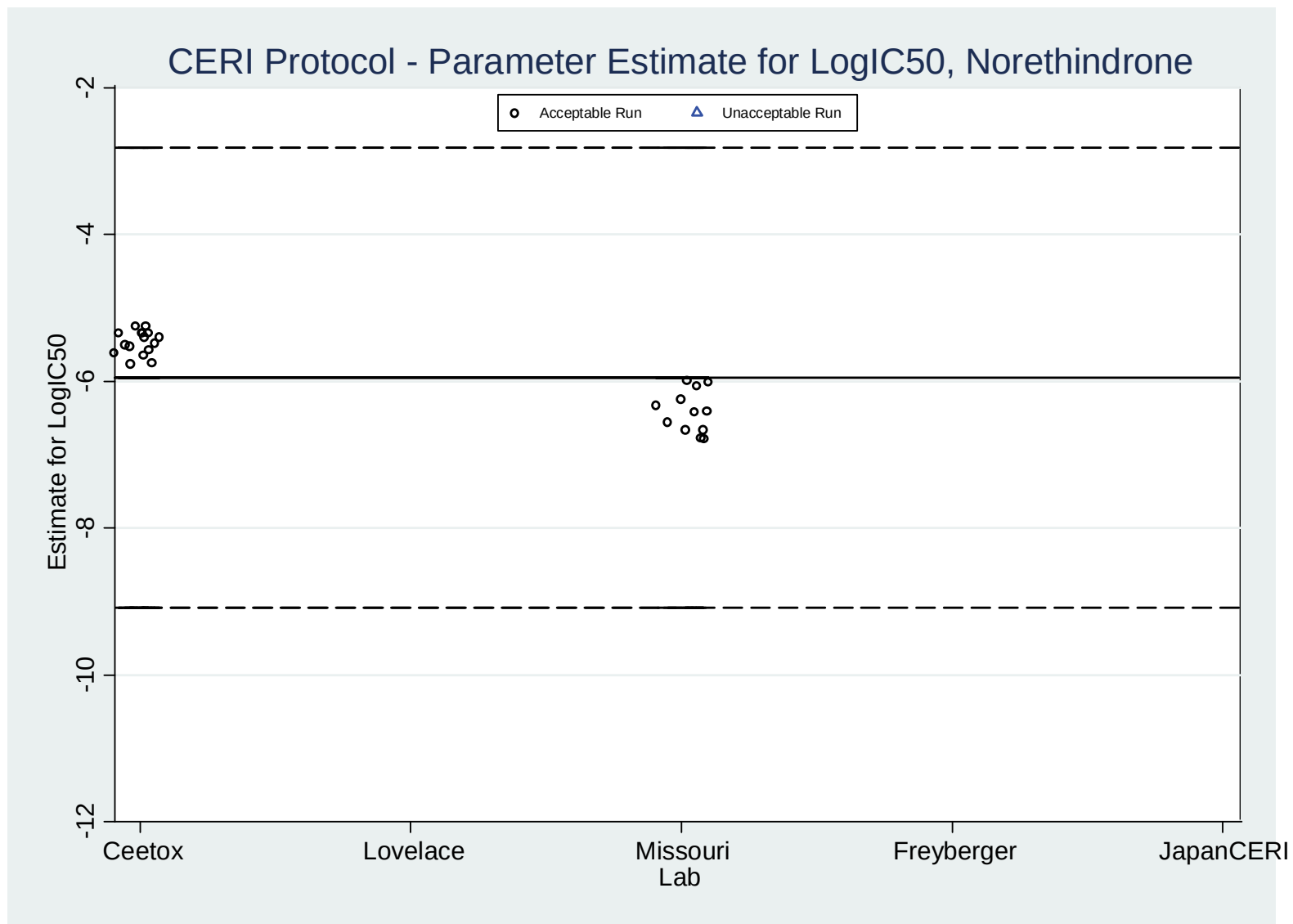


Figure A8. Parameter Estimates and Tolerance Intervals for LogIC50 for the Norethindrone (Nethdrone) for CERI Protocol.

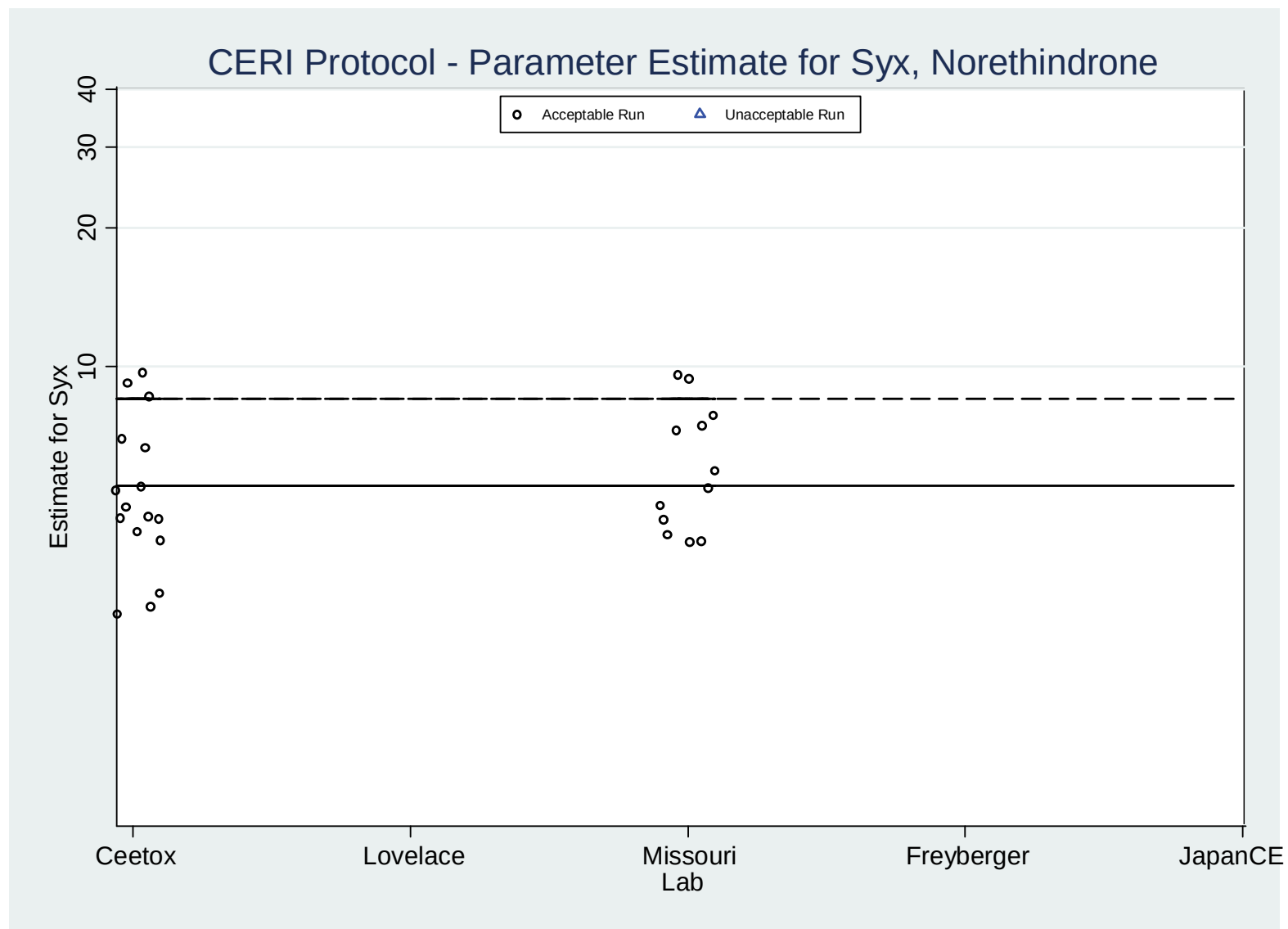


Figure A9. Parameter Estimates and Tolerance Intervals for Syx for the Norethindrone (Nethdrone) for CERI Protocol.

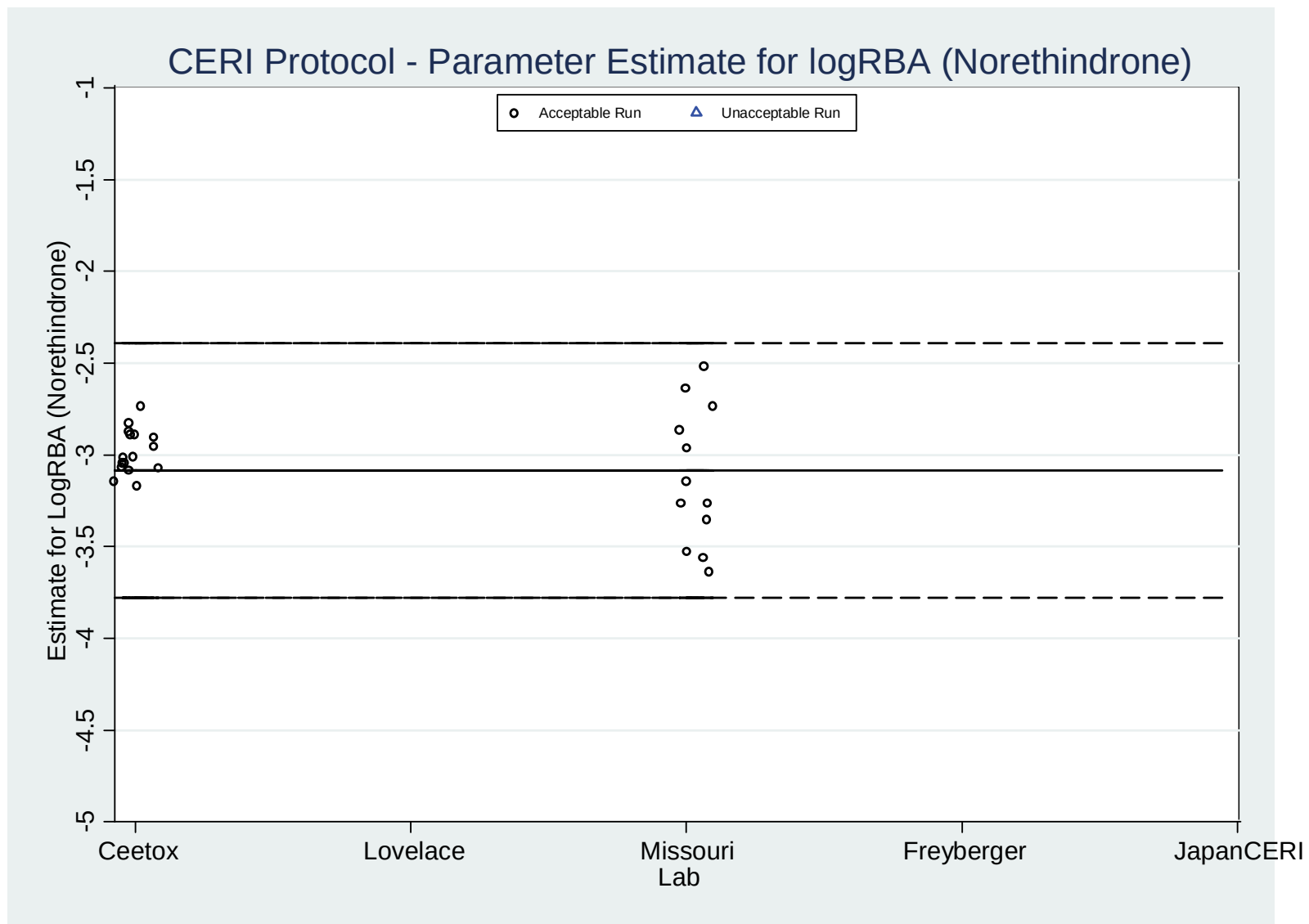


Figure A10. Parameter Estimates and Tolerance Intervals for Log(RBA_Norethindrone) for CERI Protocol.

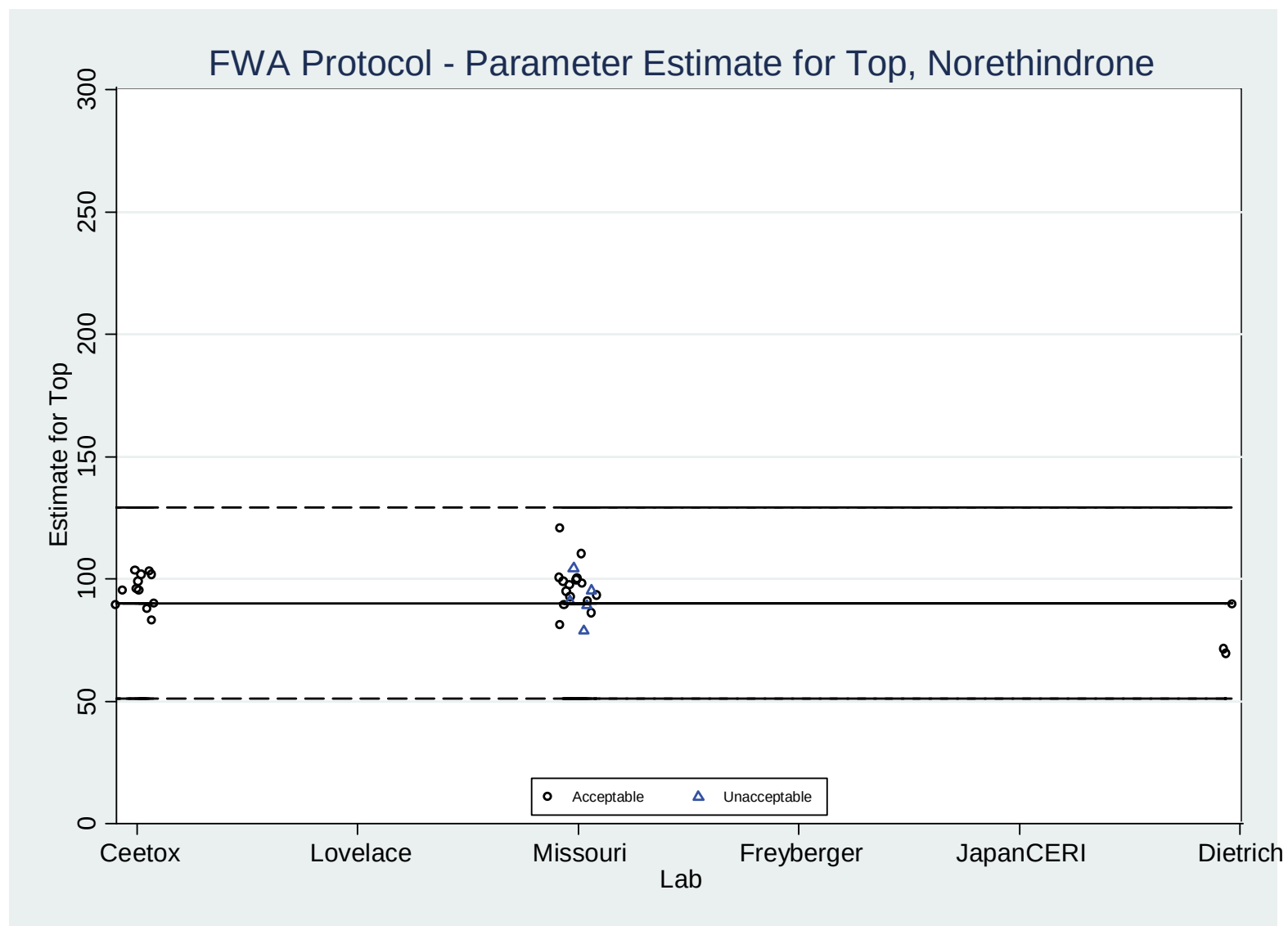


Figure A11. Parameter Estimates and Tolerance Intervals for Top for the Norethindrone (Nethdrone) for FWA Protocol.

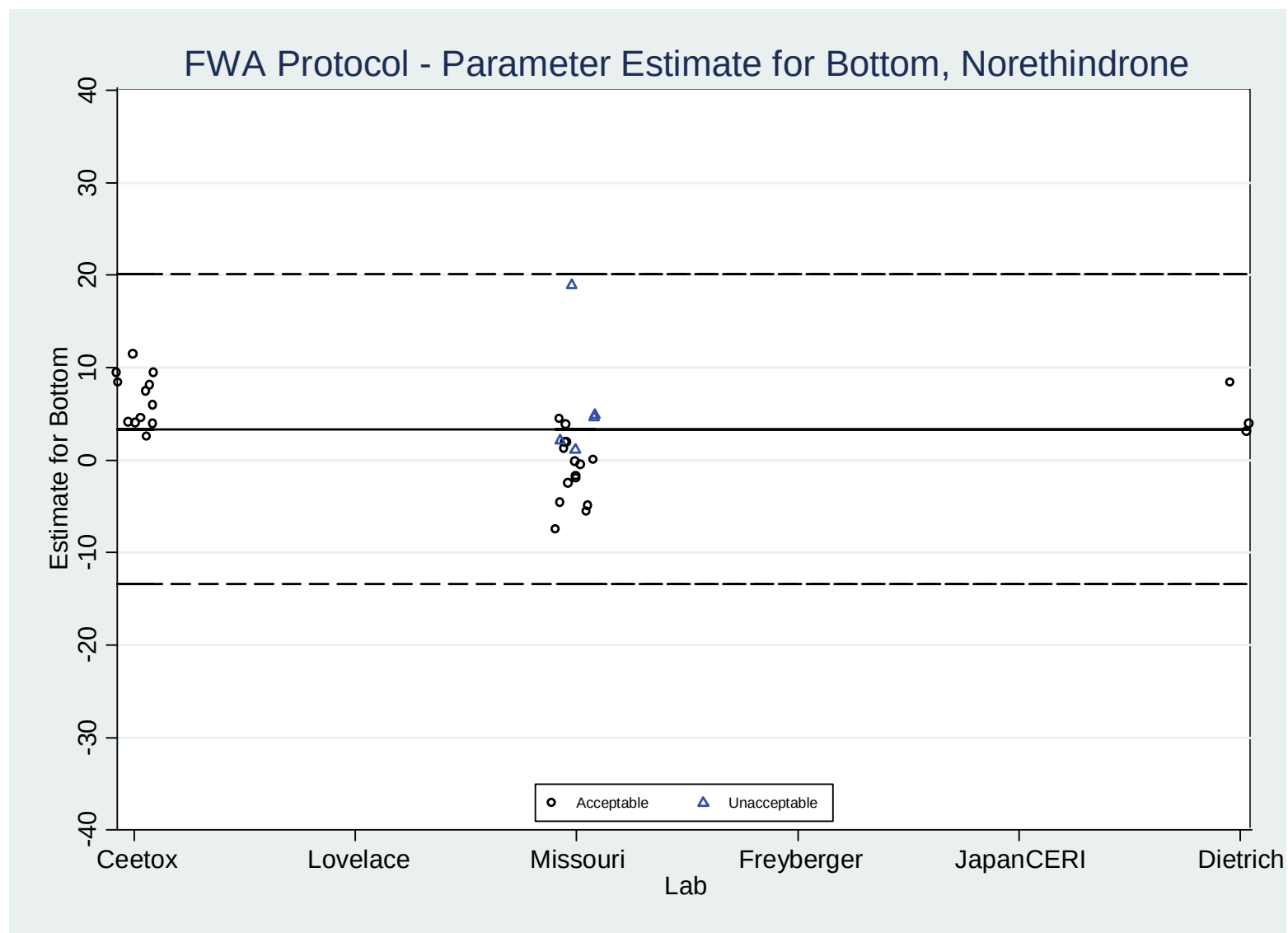


Figure A12. Parameter Estimates and Tolerance Intervals for Bottom for the Norethindrone (Nethdrone) for FWA Protocol.

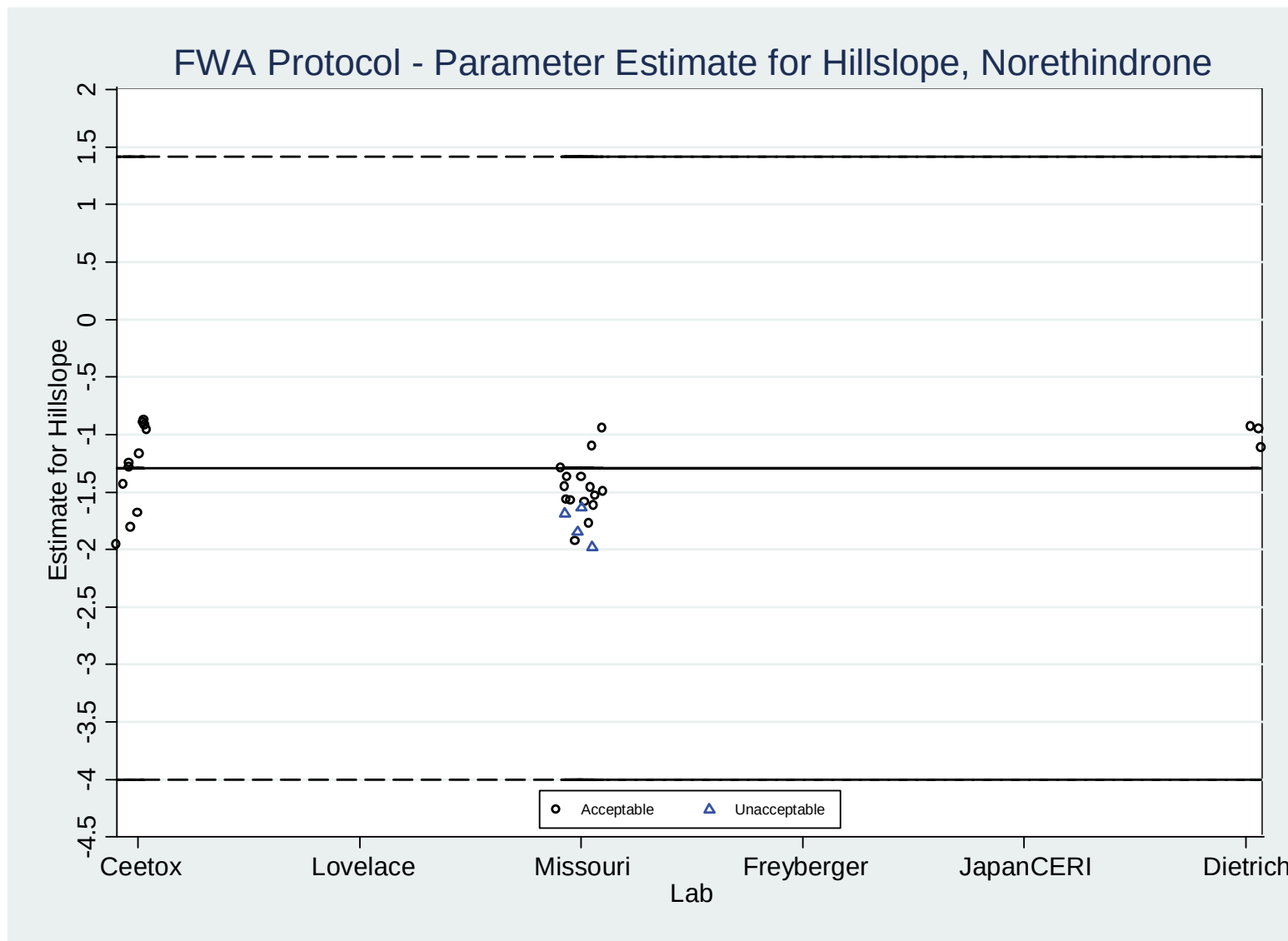


Figure A13. Parameter Estimates and Tolerance Intervals for Hillslope for the Norethindrone (Nethdrone) for FWA Protocol.

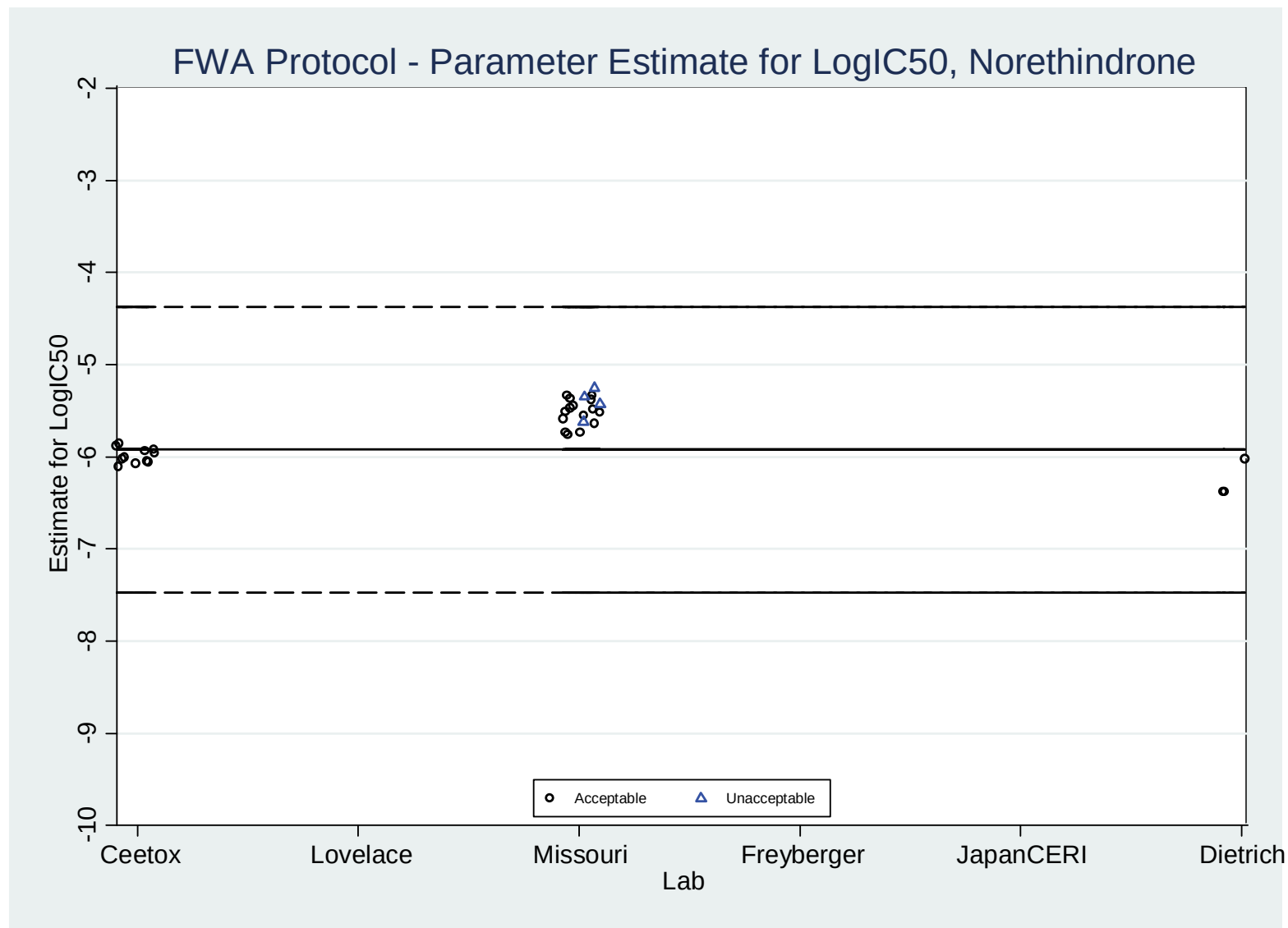


Figure A14. Parameter Estimates and Tolerance Intervals for LogIC50 for the Norethindrone (Nethdrone) for FWA Protocol.

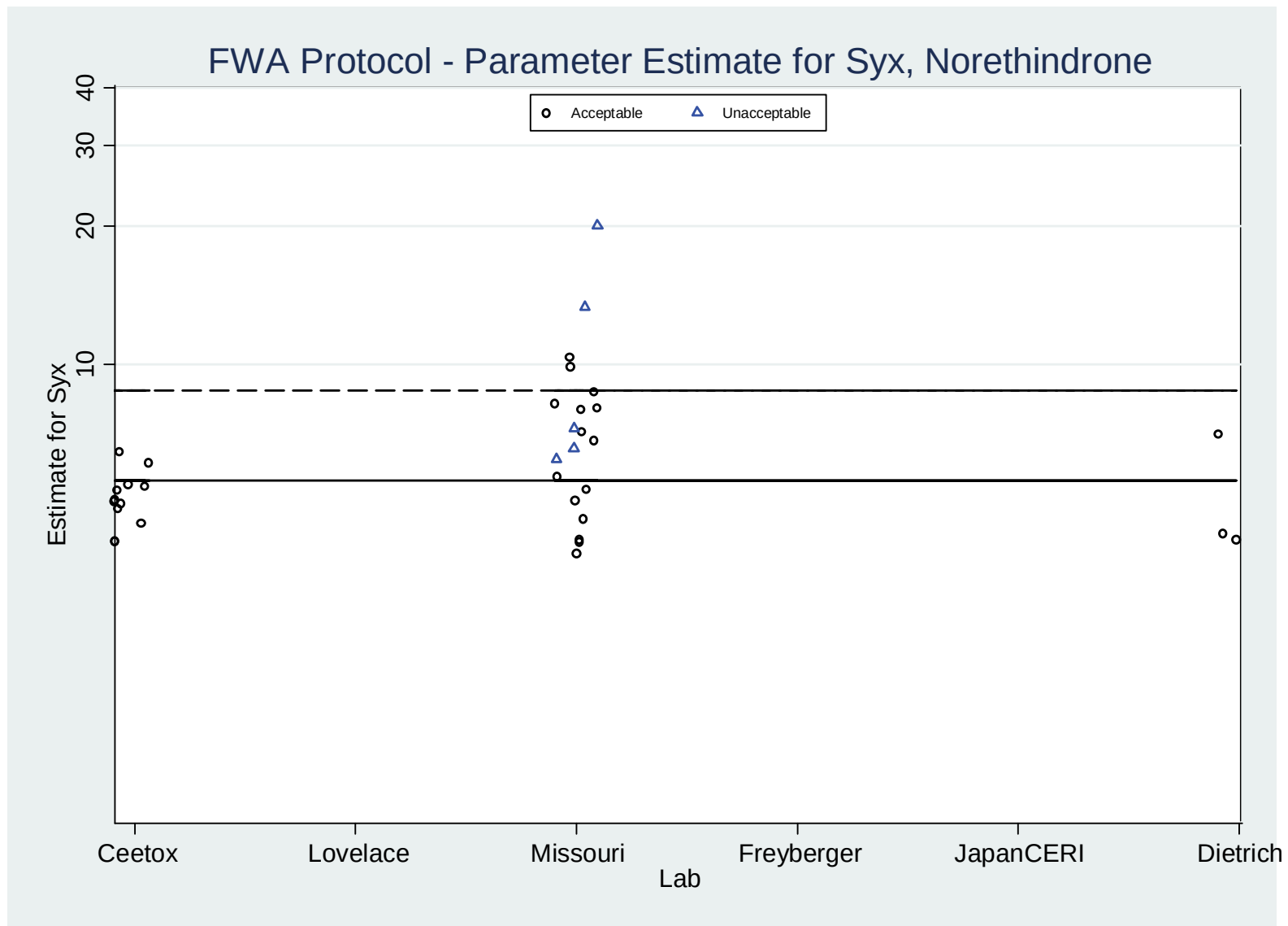


Figure A15. Parameter Estimates and Tolerance Intervals for Syx for the Norethindrone (Nethdrone) for FWA Protocol.

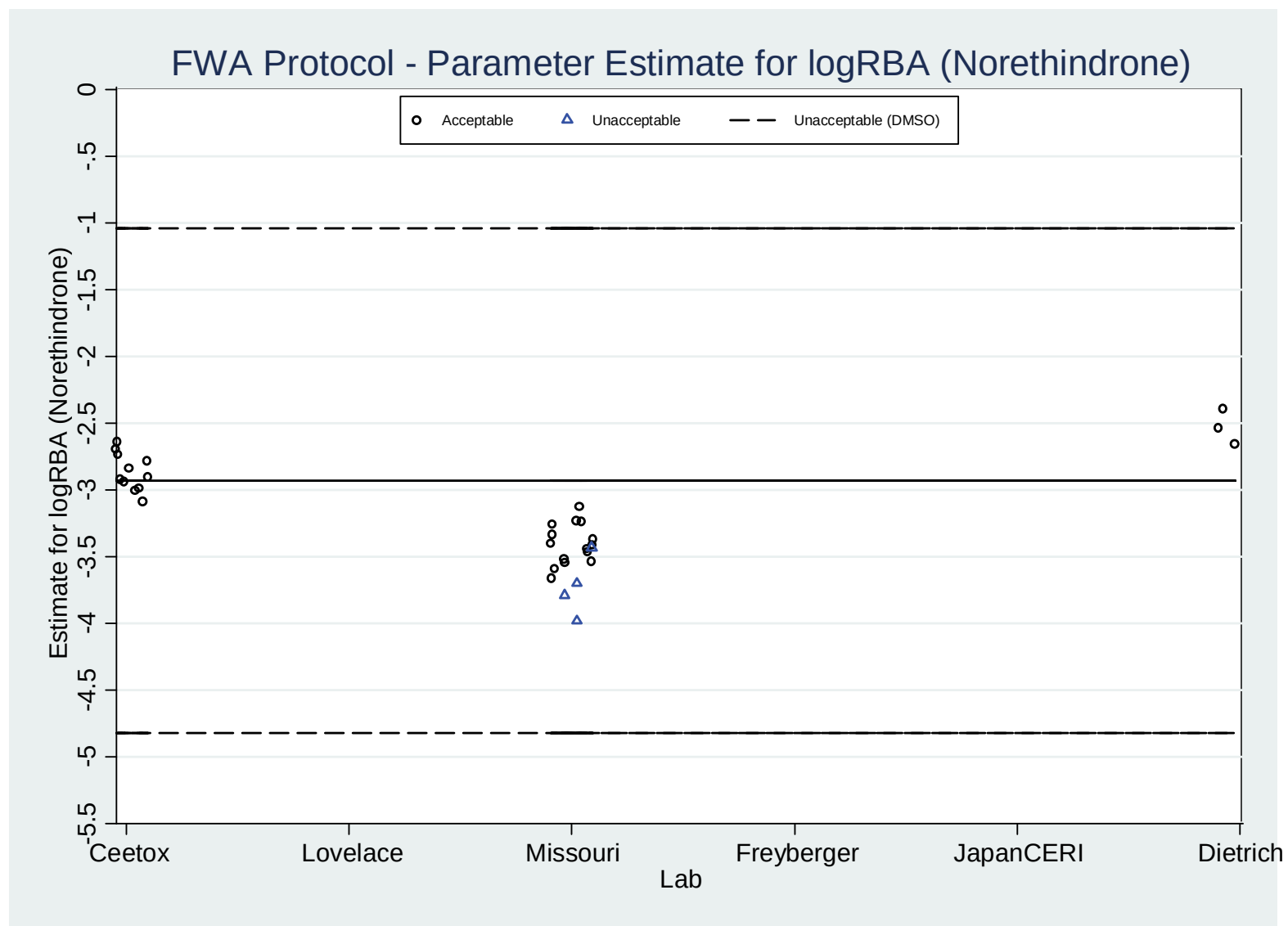


Figure A16. Parameter Estimates and Tolerance Intervals for Log(RBA_Norethindrone) for FWA Protocol.

Table B-1. CERi Assay, Parameter Estimates for the E2 Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability CERi, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st1	20090207	A	top	107	2.859	107.8325	4.05509	56.33681	159.3281	
Ceetox	st1	20090207	A	bottom	2.843	2.364	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st1	20090207	A	hillslope	-1.177	0.1329	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st1	20090207	A	logic50	-8.784	0.03572	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st1	20090207	A	Syx	5.779		4.936077	1.265377		17.64871	
Ceetox	st1	20090208	A	top	101.4	3.029	107.8325	4.05509	56.33681	159.3281	
Ceetox	st1	20090208	A	bottom	2.848	2.584	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st1	20090208	A	hillslope	-1.163	0.1492	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st1	20090208	A	logic50	-8.772	0.04053	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st1	20090208	A	Syx	6.22		4.936077	1.265377		17.64871	
Ceetox	st1	20090211	A	top	109.5	2.941	107.8325	4.05509	56.33681	159.3281	
Ceetox	st1	20090211	A	bottom	3.411	2.519	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st1	20090211	A	hillslope	-1.239	0.1478	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st1	20090211	A	logic50	-8.737	0.03697	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st1	20090211	A	Syx	6.215		4.936077	1.265377		17.64871	
Ceetox	st2	20090215	A	top	110.9	2.77	107.8325	4.05509	56.33681	159.3281	
Ceetox	st2	20090215	A	bottom	2.454	2.35	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st2	20090215	A	hillslope	-1.183	0.1266	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st2	20090215	A	logic50	-8.728	0.03409	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st2	20090215	A	Syx	5.709		4.936077	1.265377		17.64871	
Ceetox	st2	20090221	A	top	115.1	3.82	107.8325	4.05509	56.33681	159.3281	
Ceetox	st2	20090221	A	bottom	1.277	3.197	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st2	20090221	A	hillslope	-1.091	0.147	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st2	20090221	A	logic50	-8.691	0.04526	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st2	20090221	A	Syx	7.529		4.936077	1.265377		17.64871	
Ceetox	st3	20090228A	A	top	119.9	4.43	107.8325	4.05509	56.33681	159.3281	
Ceetox	st3	20090228A	A	bottom	2.012	3.439	1.054297	0.591684	-4.7575	6.866091	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st3	20090228A	A	hillslope	-1.008	0.1401	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st3	20090228A	A	logic50	-8.721	0.04952	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st3	20090228A	A	Syx	7.996		4.936077	1.265377		17.64871	
Ceetox	st3	20090305A	A	top	125.5	3.265	107.8325	4.05509	56.33681	159.3281	
Ceetox	st3	20090305A	A	bottom	0.06544	3.016	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st3	20090305A	A	hillslope	-1.251	0.1476	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st3	20090305A	A	logic50	-8.57	0.03792	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st3	20090305A	A	Syx	7.276		4.936077	1.265377		17.64871	
Ceetox	st3	20090310A	A	top	111.2	2.733	107.8325	4.05509	56.33681	159.3281	
Ceetox	st3	20090310A	A	bottom	1.866	2.543	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st3	20090310A	A	hillslope	-1.308	0.1516	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st3	20090310A	A	logic50	-8.64	0.03485	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st3	20090310A	A	Syx	6.224		4.936077	1.265377		17.64871	
Ceetox	st3	20090401A	A	top	122.4	4.036	107.8325	4.05509	56.33681	159.3281	
Ceetox	st3	20090401A	A	bottom	3.773	3.482	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st3	20090401A	A	hillslope	-1.132	0.1602	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st3	20090401A	A	logic50	-8.605	0.04864	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st3	20090401A	A	Syx	8.251		4.936077	1.265377		17.64871	
Ceetox	st4	20090903A	A	top	113.9	2.742	107.8325	4.05509	56.33681	159.3281	
Ceetox	st4	20090903A	A	bottom	1.73	3.207	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st4	20090903A	A	hillslope	-1.582	0.234	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st4	20090903A	A	logic50	-8.349	0.03842	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st4	20090903A	A	Syx	7.668		4.936077	1.265377		17.64871	
Ceetox	st4	20090905A	A	top	116.1	2.985	107.8325	4.05509	56.33681	159.3281	
Ceetox	st4	20090905A	A	bottom	2.841	2.69	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st4	20090905A	A	hillslope	-1.299	0.1551	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st4	20090905A	A	logic50	-8.654	0.03676	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st4	20090905A	A	Syx	6.641		4.936077	1.265377		17.64871	
Ceetox	st4	20090907A	A	top	176.8	6.272	107.8325	4.05509	56.33681	159.3281	Above

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090907A	A	bottom	5.987	5.802	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st4	20090907A	A	hillslope	-1.374	0.2378	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st4	20090907A	A	logic50	-8.413	0.06753	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st4	20090907A	A	Syx	14.49		4.936077	1.265377		17.64871	
Ceetox	st4	20090930A	A	top	106.4	3.513	107.8325	4.05509	56.33681	159.3281	
Ceetox	st4	20090930A	A	bottom	9.64	4.07	1.054297	0.591684	-4.7575	6.866091	Above
Ceetox	st4	20090930A	A	hillslope	-1.76	0.4148	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st4	20090930A	A	logic50	-8.391	0.05499	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st4	20090930A	A	Syx	10		4.936077	1.265377		17.64871	
Freyberger	st2	B	A	top	101	0.7404	107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	B	A	bottom	-0.4851	0.5382	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	B	A	hillslope	-1.094	0.02938	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	B	A	logic50	-9.003	0.008736	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	B	A	Syx	1.332		4.936077	1.265377		17.64871	
Freyberger	st2	C	A	top	99.55	0.7357	107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	C	A	bottom	-0.5349	0.5319	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	C	A	hillslope	-1.102	0.02981	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	C	A	logic50	-9.024	0.008774	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	C	A	Syx	1.323		4.936077	1.265377		17.64871	
Freyberger	st2	D	A	top	99.27	0.7392	107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	D	A	bottom	-0.2586	0.5305	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	D	A	hillslope	-1.069	0.0287	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	D	A	logic50	-9.024	0.00885	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	D	A	Syx	1.305		4.936077	1.265377		17.64871	
Freyberger	st2	E	A	top	102.7	0.9177	107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	E	A	bottom	-1.389	0.6566	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	E	A	hillslope	-1.131	0.03692	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	E	A	logic50	-9.029	0.01041	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	E	A	Syx	1.659		4.936077	1.265377		17.64871	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st2	F	A	top	102.8	0.9923	107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	F	A	bottom	-0.6075	0.6732	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	F	A	hillslope	-1.162	0.04058	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	F	A	logic50	-9.102	0.01092	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	F	A	Syx	1.755		4.936077	1.265377		17.64871	
Freyberger	st2	G	A	top	88.15	1.517	107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	G	A	bottom	0.6031	1.328	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	G	A	hillslope	-1.59	0.1375	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	G	A	logic50	-8.948	0.02241	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	G	A	Syx	3.549		4.936077	1.265377		17.64871	
Freyberger	st3	CODE A1	A	top	95.85	1.61	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE A1	A	bottom	0.2734	1.132	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE A1	A	hillslope	-1.12	0.06882	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE A1	A	logic50	-9.091	0.01982	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE A1	A	Syx	2.865		4.936077	1.265377		17.64871	
Freyberger	st3	CODE A2	A	top	100.8	1.462	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE A2	A	bottom	-0.5603	0.9848	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE A2	A	hillslope	-1.036	0.05129	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE A2	A	logic50	-9.09	0.01653	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE A2	A	Syx	2.438		4.936077	1.265377		17.64871	
Freyberger	st3	CODE A3	A	top	99.95	1.283	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE A3	A	bottom	-1.267	0.8838	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE A3	A	hillslope	-1.106	0.05028	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE A3	A	logic50	-9.093	0.01468	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE A3	A	Syx	2.241		4.936077	1.265377		17.64871	
Freyberger	st3	CODE B1	A	top	98.76	1.074	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE B1	A	bottom	-0.3734	0.742	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE B1	A	hillslope	-1.142	0.04512	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE B1	A	logic50	-9.101	0.01253	-8.923	0.083503	-9.57024	-8.27576	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st3	CODE B1	A	Syx	1.907		4.936077	1.265377		17.64871	
Freyberger	st3	CODE B2	A	top	99.68	1.223	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE B2	A	bottom	-0.2106	0.8668	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE B2	A	hillslope	-1.118	0.05013	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE B2	A	logic50	-9.052	0.0144	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE B2	A	Syx	2.186		4.936077	1.265377		17.64871	
Freyberger	st3	CODE B3	A	top	99.2	1.209	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE B3	A	bottom	0.1685	0.8364	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE B3	A	hillslope	-1.158	0.05193	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE B3	A	logic50	-9.095	0.01409	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE B3	A	Syx	2.161		4.936077	1.265377		17.64871	
Freyberger	st3	CODE C1	A	top	103	1.448	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE C1	A	bottom	-0.9596	1.064	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE C1	A	hillslope	-1.201	0.06493	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE C1	A	logic50	-9.007	0.01658	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE C1	A	Syx	2.732		4.936077	1.265377		17.64871	
Freyberger	st3	CODE C2	A	top	103.6	0.904	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE C2	A	bottom	-0.738	0.6462	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE C2	A	hillslope	-1.144	0.03694	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE C2	A	logic50	-9.023	0.01021	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE C2	A	Syx	1.642		4.936077	1.265377		17.64871	
Freyberger	st3	CODE C3	A	top	96.78	1.037	107.8325	4.05509	56.33681	159.3281	
Freyberger	st3	CODE C3	A	bottom	-0.7737	0.7599	1.054297	0.591684	-4.7575	6.866091	
Freyberger	st3	CODE C3	A	hillslope	-1.139	0.04563	-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st3	CODE C3	A	logic50	-9.04	0.01281	-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st3	CODE C3	A	Syx	1.91		4.936077	1.265377		17.64871	
JapanCER1	st1	091224_01	A	top	92.45	1.591	107.8325	4.05509	56.33681	159.3281	
JapanCER1	st1	091224_01	A	bottom	-0.933	1.322	1.054297	0.591684	-4.7575	6.866091	
JapanCER1	st1	091224_01	A	hillslope	-1.367	0.104	-1.19633	0.040431	-2.25406	-0.13859	

Laboratory	Sub Task	Test ID	Acceptability CERi, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st1	091224_01	A	logic50	-8.957	0.02182	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st1	091224_01	A	Syx	3.418		4.936077	1.265377		17.64871	
JapanCERI	st1	100107_02	A	top	99.42	1.459	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st1	100107_02	A	bottom	-0.8592	1.149	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st1	100107_02	A	hillslope	-1.424	0.09269	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st1	100107_02	A	logic50	-8.986	0.01757	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st1	100107_02	A	Syx	3.072		4.936077	1.265377		17.64871	
JapanCERI	st1	100108_03	A	top	101.8	2.576	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st1	100108_03	A	bottom	-3.529	2.028	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st1	100108_03	A	hillslope	-1.277	0.1304	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st1	100108_03	A	logic50	-8.959	0.03017	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st1	100108_03	A	Syx	5.207		4.936077	1.265377		17.64871	
JapanCERI	st2	100119_01	A	top	108	4.198	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st2	100119_01	A	bottom	4.423	3.925	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st2	100119_01	A	hillslope	-1.423	0.2779	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st2	100119_01	A	logic50	-8.67	0.0559	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st2	100119_01	A	Syx	9.886		4.936077	1.265377		17.64871	
JapanCERI	st2	100126_02	A	top	109.7	2.165	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st2	100126_02	A	bottom	4.007	1.82	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st2	100126_02	A	hillslope	-1.377	0.1271	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st2	100126_02	A	logic50	-8.804	0.02659	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st2	100126_02	A	Syx	4.699		4.936077	1.265377		17.64871	
JapanCERI	st2	100129_03	A	top	101	3.419	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st2	100129_03	A	bottom	1.344	2.803	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st2	100129_03	A	hillslope	-1.136	0.1569	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st2	100129_03	A	logic50	-8.835	0.04417	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st2	100129_03	A	Syx	6.768		4.936077	1.265377		17.64871	
JapanCERI	st3	100203_01	A	top	137.8	2.214	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100203_01	A	bottom	-0.4119	1.798	1.054297	0.591684	-4.7575	6.866091	

Laboratory	Sub Task	Test ID	Acceptability CERi, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	100203_01	A	hillslope	-1.22	0.08099	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100203_01	A	logic50	-8.695	0.02244	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100203_01	A	Syx	4.488		4.936077	1.265377		17.64871	
JapanCERI	st3	100208_02	A	top	126.6	2.146	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100208_02	A	bottom	-2.682	1.814	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100208_02	A	hillslope	-1.212	0.08501	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100208_02	A	logic50	-8.7	0.02265	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100208_02	A	Syx	4.455		4.936077	1.265377		17.64871	
JapanCERI	st3	100215_03	A	top	102.1	1.866	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100215_03	A	bottom	4.303	1.638	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100215_03	A	hillslope	-1.405	0.1244	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100215_03	A	logic50	-8.793	0.02497	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100215_03	A	Syx	4.198		4.936077	1.265377		17.64871	
JapanCERI	st3	100223_04	A	top	97.33	2.145	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100223_04	A	bottom	4.079	1.809	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100223_04	A	hillslope	-1.459	0.1569	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100223_04	A	logic50	-8.891	0.02889	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100223_04	A	Syx	4.76		4.936077	1.265377		17.64871	
JapanCERI	st3	100224_05	A	top	106.7	2.021	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100224_05	A	bottom	6.039	1.755	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100224_05	A	hillslope	-1.527	0.1487	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100224_05	A	logic50	-8.803	0.02614	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100224_05	A	Syx	4.643		4.936077	1.265377		17.64871	
JapanCERI	st3	100225_06	A	top	93.76	1.422	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100225_06	A	bottom	3.021	1.267	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100225_06	A	hillslope	-1.51	0.1147	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100225_06	A	logic50	-8.858	0.02036	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100225_06	A	Syx	3.31		4.936077	1.265377		17.64871	
JapanCERI	st3	100226_07	A	top	100.2	1.247	107.8325	4.05509	56.33681	159.3281	

Laboratory	Sub Task	Test ID	Acceptability CERi, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	100226_07	A	bottom	2.946	1.092	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100226_07	A	hillslope	-1.413	0.08423	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100226_07	A	logic50	-8.82	0.01667	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100226_07	A	Syx	2.807		4.936077	1.265377		17.64871	
JapanCERI	st3	100301_08	A	top	90.77	0.7501	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100301_08	A	bottom	1.15	0.666	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100301_08	A	hillslope	-1.217	0.04446	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100301_08	A	logic50	-8.828	0.01144	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100301_08	A	Syx	1.611		4.936077	1.265377		17.64871	
JapanCERI	st3	100303_09	A	top	115.1	2.179	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100303_09	A	bottom	-0.6877	1.913	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100303_09	A	hillslope	-1.332	0.1133	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100303_09	A	logic50	-8.734	0.02525	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100303_09	A	Syx	4.81		4.936077	1.265377		17.64871	
JapanCERI	st3	100305_10	A	top	98.48	1.584	107.8325	4.05509	56.33681	159.3281	
JapanCERI	st3	100305_10	A	bottom	3.412	1.359	1.054297	0.591684	-4.7575	6.866091	
JapanCERI	st3	100305_10	A	hillslope	-1.106	0.07571	-1.19633	0.040431	-2.25406	-0.13859	
JapanCERI	st3	100305_10	A	logic50	-8.761	0.02216	-8.923	0.083503	-9.57024	-8.27576	
JapanCERI	st3	100305_10	A	Syx	3.193		4.936077	1.265377		17.64871	
Lovelace	st1	6-Jan-09	A	top	160.6	21.13	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st1	6-Jan-09	A	bottom	7.568	13.77	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st1	6-Jan-09	A	hillslope	-0.8171	0.3479	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st1	6-Jan-09	A	logic50	-8.53	0.2059	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st1	6-Jan-09	A	Syx	29.89		4.936077	1.265377		17.64871	Above
Lovelace	st1	13-Jan-09	A	top	102	3.851	107.8325	4.05509	56.33681	159.3281	
Lovelace	st1	13-Jan-09	A	bottom	4.36	2.218	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st1	13-Jan-09	A	hillslope	-1.136	0.1486	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st1	13-Jan-09	A	logic50	-9.288	0.04072	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st1	13-Jan-09	A	Syx	6.074		4.936077	1.265377		17.64871	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st1	16-Jan-09	A	top	97.3	8.375	107.8325	4.05509	56.33681	159.3281	
Lovelace	st1	16-Jan-09	A	bottom	-6.615	4.024	1.054297	0.591684	-4.7575	6.866091	Below
Lovelace	st1	16-Jan-09	A	hillslope	-0.755	0.1573	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st1	16-Jan-09	A	logic50	-9.475	0.07775	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st1	16-Jan-09	A	Syx	8.95		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_12-Nov-09	A	top	97.87	4.749	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_12-Nov-09	A	bottom	2.332	4.6	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_12-Nov-09	A	hillslope	-1.069	0.2381	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_12-Nov-09	A	logic50	-8.576	0.07183	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_12-Nov-09	A	Syx	10.18		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_23-Sep-09	A	top	117.4	4.561	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_23-Sep-09	A	bottom	-1.757	4.708	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_23-Sep-09	A	hillslope	-1.68	0.3618	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_23-Sep-09	A	logic50	-8.557	0.05362	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_23-Sep-09	A	Syx	12.02		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_29	A	top	104.6	9.137	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_29	A	bottom	8.093	7.224	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st12	ABC Coded_29	A	hillslope	-1.277	0.5062	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_29	A	logic50	-8.853	0.1195	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_29	A	Syx	18.52		4.936077	1.265377		17.64871	Above
Lovelace	st12	ABC Coded_29-Jan-10	A	top	163.8	7.676	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st12	ABC Coded_29-Jan-10	A	bottom	-1.785	4.493	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_29-Jan-10	A	hillslope	-1.05	0.1568	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_29-Jan-10	A	logic50	-8.966	0.05824	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_29-Jan-10	A	Syx	11.76		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	top	97.34	7.041	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	bottom	-1.943	3.67	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	hillslope	-1.003	0.215	-1.19633	0.040431	-2.25406	-0.13859	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	logic50	-9.468	0.07052	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	Syx	9.719		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	top	87.84	5.359	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	bottom	1.729	3.177	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	hillslope	-1.386	0.3183	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	logic50	-9.422	0.06556	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	Syx	9.378		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	top	86.1	5.999	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	bottom	8.084	3.384	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	hillslope	-1.263	0.3358	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	logic50	-9.446	0.07859	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	Syx	9.795		4.936077	1.265377		17.64871	
Lovelace	st2	4-May-09	A	top	126.5	1.951	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	4-May-09	A	bottom	0.4636	1.449	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	4-May-09	A	hillslope	-1.15	0.06797	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	4-May-09	A	logic50	-8.829	0.01981	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	4-May-09	A	Syx	3.639		4.936077	1.265377		17.64871	
Lovelace	st2	5-May-09	A	top	86.58	4.261	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	5-May-09	A	bottom	0.7219	4.204	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	5-May-09	A	hillslope	-1.582	0.4094	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	5-May-09	A	logic50	-8.771	0.07092	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	5-May-09	A	Syx	10.75		4.936077	1.265377		17.64871	
Lovelace	st2	6-May-09	A	top	151.2	3.771	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	6-May-09	A	bottom	-3.004	2.478	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	6-May-09	A	hillslope	-0.9202	0.07261	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	6-May-09	A	logic50	-8.776	0.03158	-8.923	0.083503	-9.57024	-8.27576	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	6-May-09	A	Syx	5.8		4.936077	1.265377		17.64871	
Lovelace	st2	8-May-09	A	top	111.9	4.548	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	8-May-09	A	bottom	5.471	4.076	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	8-May-09	A	hillslope	-1.028	0.182	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	8-May-09	A	logic50	-8.542	0.06169	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	8-May-09	A	Syx	9.101		4.936077	1.265377		17.64871	
Lovelace	st2	26-Feb-09	A	top	111.8	7.496	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	26-Feb-09	A	bottom	8.488	4.374	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st2	26-Feb-09	A	hillslope	-1.162	0.2838	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	26-Feb-09	A	logic50	-9.178	0.07868	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	26-Feb-09	A	Syx	12.05		4.936077	1.265377		17.64871	
Lovelace	st2	27-Feb-09	A	top	166.1	6.412	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st2	27-Feb-09	A	bottom	3.988	3.944	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	27-Feb-09	A	hillslope	-1.283	0.1834	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	27-Feb-09	A	logic50	-8.963	0.05342	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	27-Feb-09	A	Syx	11.13		4.936077	1.265377		17.64871	
Lovelace	st2	27-Mar-09	A	top	184.1	23.67	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st2	27-Mar-09	A	bottom	-4.97	14.87	1.054297	0.591684	-4.7575	6.866091	Below
Lovelace	st2	27-Mar-09	A	hillslope	-0.882	0.3423	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	27-Mar-09	A	logic50	-8.685	0.1747	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	27-Mar-09	A	Syx	34.4		4.936077	1.265377		17.64871	Above
Lovelace	st3	1-Jun-09	A	top	106.7	2.562	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	1-Jun-09	A	bottom	2.414	2.046	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	1-Jun-09	A	hillslope	-1.157	0.1136	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	1-Jun-09	A	logic50	-8.83	0.03126	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	1-Jun-09	A	Syx	5.026		4.936077	1.265377		17.64871	
Lovelace	st3	4-Jun-09	A	top	109.1	6.544	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	4-Jun-09	A	bottom	1.392	4.41	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	4-Jun-09	A	hillslope	-0.856	0.166	-1.19633	0.040431	-2.25406	-0.13859	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	4-Jun-09	A	logic50	-8.916	0.07025	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	4-Jun-09	A	Syx	9.776		4.936077	1.265377		17.64871	
Lovelace	st3	8-Jun-09	A	top	108.6	1.858	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	8-Jun-09	A	bottom	2.308	1.438	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	8-Jun-09	A	hillslope	-1.037	0.06767	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	8-Jun-09	A	logic50	-8.812	0.02213	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	8-Jun-09	A	Syx	3.396		4.936077	1.265377		17.64871	
Lovelace	st3	10-Jul-09	A	top	112.8	4.312	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	10-Jul-09	A	bottom	-1.319	2.816	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	10-Jul-09	A	hillslope	-0.8412	0.09902	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	10-Jul-09	A	logic50	-8.946	0.04273	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	10-Jul-09	A	Syx	6.234		4.936077	1.265377		17.64871	
Lovelace	st3	10-Jun-09	A	top	117.7	2.312	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	10-Jun-09	A	bottom	0.9932	1.426	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	10-Jun-09	A	hillslope	-0.9666	0.06096	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	10-Jun-09	A	logic50	-9.043	0.02207	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	10-Jun-09	A	Syx	3.507		4.936077	1.265377		17.64871	
Lovelace	st3	11-Jun-09	A	top	135.5	4.634	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	11-Jun-09	A	bottom	1.163	2.817	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	11-Jun-09	A	hillslope	-0.996	0.11	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	11-Jun-09	A	logic50	-8.976	0.04069	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	11-Jun-09	A	Syx	7.078		4.936077	1.265377		17.64871	
Lovelace	st3	15-Jun-09	A	top	111.5	4.99	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	15-Jun-09	A	bottom	0.1897	3.245	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	15-Jun-09	A	hillslope	-0.9517	0.1387	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	15-Jun-09	A	logic50	-9.014	0.05081	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	15-Jun-09	A	Syx	7.771		4.936077	1.265377		17.64871	
Missouri	st1	4001 2m	A	top	88.43	3.574	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	4001 2m	A	bottom	0.378	2.618	1.054297	0.591684	-4.7575	6.866091	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st1	4001 2m	A	hillslope	-1.068	0.1585	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4001 2m	A	logic50	-9.091	0.05069	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4001 2m	A	Syx	6.39		4.936077	1.265377		17.64871	
Missouri	st1	4001 final	A	top	101.9	5.124	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	4001 final	A	bottom	-1.15	3.084	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	4001 final	A	hillslope	-0.7993	0.1164	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4001 final	A	logic50	-9.126	0.05279	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4001 final	A	Syx	6.754		4.936077	1.265377		17.64871	
Missouri	st1	4002 final	A	top	105.7	3.23	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	4002 final	A	bottom	0.8615	1.931	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	4002 final	A	hillslope	-0.8488	0.07793	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4002 final	A	logic50	-9.108	0.03267	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4002 final	A	Syx	4.425		4.936077	1.265377		17.64871	
Missouri	st1	4003 final	A	top	102.7	6.1	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	4003 final	A	bottom	0.7419	5.003	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	4003 final	A	hillslope	-1.206	0.2989	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4003 final	A	logic50	-8.85	0.07644	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4003 final	A	Syx	12.39		4.936077	1.265377		17.64871	
Missouri	st1	4005 final	A	top	95.96	3.374	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	4005 final	A	bottom	-0.2007	2.279	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	4005 final	A	hillslope	-1.06	0.1292	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4005 final	A	logic50	-9.133	0.04053	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4005 final	A	Syx	5.701		4.936077	1.265377		17.64871	
Missouri	st1	4006 final	A	top	102.5	3.212	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	4006 final	A	bottom	-0.6895	2.158	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	4006 final	A	hillslope	-1.034	0.1102	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4006 final	A	logic50	-9.081	0.0356	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4006 final	A	Syx	5.342		4.936077	1.265377		17.64871	
Missouri	st1	4007 final	A	top	95.29	3.086	107.8325	4.05509	56.33681	159.3281	

Laboratory	Sub Task	Test ID	Acceptability CERi, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st1	4007 final	A	bottom	0.4471	2.015	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	4007 final	A	hillslope	-0.9647	0.1028	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	4007 final	A	logic50	-9.15	0.03703	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	4007 final	A	Syx	4.856		4.936077	1.265377		17.64871	
Missouri	st1	5003 stds only w2	A	top	94.9	2.972	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	5003 stds only w2	A	bottom	-1.036	2.406	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	5003 stds only w2	A	hillslope	-1.369	0.1872	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	5003 stds only w2	A	logic50	-8.974	0.0387	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	5003 stds only w2	A	Syx	6.278		4.936077	1.265377		17.64871	
Missouri	st1	5005 stds only w1	A	top	107.2	2.01	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	5005 stds only w1	A	bottom	0.7431	1.613	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	5005 stds only w1	A	hillslope	-1.392	0.123	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	5005 stds only w1	A	logic50	-8.908	0.02356	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	5005 stds only w1	A	Syx	4.234		4.936077	1.265377		17.64871	
Missouri	st1	5007 stds only E2	A	top	100.2	2.099	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	5007 stds only E2	A	bottom	1.33	1.394	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	5007 stds only E2	A	hillslope	-1.173	0.08994	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	5007 stds only E2	A	logic50	-9.138	0.02382	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	5007 stds only E2	A	Syx	3.677		4.936077	1.265377		17.64871	
Missouri	st1	5010 stds only w2	A	top	100.4	2.59	107.8325	4.05509	56.33681	159.3281	
Missouri	st1	5010 stds only w2	A	bottom	-1.597	1.578	1.054297	0.591684	-4.7575	6.866091	
Missouri	st1	5010 stds only w2	A	hillslope	-1.159	0.101	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st1	5010 stds only w2	A	logic50	-9.274	0.02714	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st1	5010 stds only w2	A	Syx	4.275		4.936077	1.265377		17.64871	
Missouri	st2	5006 no del	A	top	103.9	2.065	107.8325	4.05509	56.33681	159.3281	
Missouri	st2	5006 no del	A	bottom	-1.1	1.284	1.054297	0.591684	-4.7575	6.866091	
Missouri	st2	5006 no del	A	hillslope	-1.099	0.07305	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st2	5006 no del	A	logic50	-9.201	0.02133	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st2	5006 no del	A	Syx	3.367		4.936077	1.265377		17.64871	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st2	5008 default	A	top	96.94	2.206	107.8325	4.05509	56.33681	159.3281	
Missouri	st2	5008 default	A	bottom	1.561	1.805	1.054297	0.591684	-4.7575	6.866091	
Missouri	st2	5008 default	A	hillslope	-1.56	0.1751	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st2	5008 default	A	logic50	-8.962	0.02798	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st2	5008 default	A	Syx	4.906		4.936077	1.265377		17.64871	
Missouri	st2	5009 no deletion	A	top	111.8	2.432	107.8325	4.05509	56.33681	159.3281	
Missouri	st2	5009 no deletion	A	bottom	-1.141	1.694	1.054297	0.591684	-4.7575	6.866091	
Missouri	st2	5009 no deletion	A	hillslope	-1.172	0.0937	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st2	5009 no deletion	A	logic50	-9.015	0.02509	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st2	5009 no deletion	A	Syx	4.39		4.936077	1.265377		17.64871	
Missouri	st3	1-7_6001 final	A	top	98.78	2.17	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	1-7_6001 final	A	bottom	3.797	1.849	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	1-7_6001 final	A	hillslope	-1.542	0.1714	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	1-7_6001 final	A	logic50	-8.887	0.02856	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	1-7_6001 final	A	Syx	4.938		4.936077	1.265377		17.64871	
Missouri	st3	1-7_6002 final	A	top	94.92	1.576	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	1-7_6002 final	A	bottom	-2.216	1.16	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	1-7_6002 final	A	hillslope	-1.066	0.06335	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	1-7_6002 final	A	logic50	-9.041	0.01993	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	1-7_6002 final	A	Syx	2.825		4.936077	1.265377		17.64871	
Missouri	st3	1-7_6005 final	A	top	98.8	2.057	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	1-7_6005 final	A	bottom	1.657	1.505	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	1-7_6005 final	A	hillslope	-1.443	0.132	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	1-7_6005 final	A	logic50	-9.063	0.02438	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	1-7_6005 final	A	Syx	4.156		4.936077	1.265377		17.64871	
Missouri	st3	1-7_6006 final	A	top	95.6	3.414	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	1-7_6006 final	A	bottom	2.622	2.549	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	1-7_6006 final	A	hillslope	-1.22	0.172	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	1-7_6006 final	A	logic50	-9.109	0.04206	-8.923	0.083503	-9.57024	-8.27576	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st3	1-7_6006 final	A	Syx	6.227		4.936077	1.265377		17.64871	
Missouri	st3	1-7_6007 final	A	top	109.3	3.02	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	1-7_6007 final	A	bottom	-1.248	2.484	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	1-7_6007 final	A	hillslope	-1.393	0.1711	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	1-7_6007 final	A	logic50	-8.872	0.03427	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	1-7_6007 final	A	Syx	6.488		4.936077	1.265377		17.64871	
Missouri	st3	6502 final	A	top	102.1	2.855	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	6502 final	A	bottom	-1.905	1.855	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	6502 final	A	hillslope	-0.9759	0.08792	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	6502 final	A	logic50	-9.119	0.03087	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	6502 final	A	Syx	4.507		4.936077	1.265377		17.64871	
Missouri	st3	6503 final	A	top	91.4	1.594	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	6503 final	A	bottom	-1.051	1.211	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	6503 final	A	hillslope	-1.203	0.08217	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	6503 final	A	logic50	-9.052	0.02148	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	6503 final	A	Syx	3.076		4.936077	1.265377		17.64871	
Missouri	st3	6504 final	A	top	89.96	5.267	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	6504 final	A	bottom	-0.8957	4.176	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	6504 final	A	hillslope	-1.072	0.239	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	6504 final	A	logic50	-8.976	0.07577	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	6504 final	A	Syx	9.936		4.936077	1.265377		17.64871	
Missouri	st3	8-14_6009 final	A	top	107.3	3.887	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	8-14_6009 final	A	bottom	-1.868	2.103	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	8-14_6009 final	A	hillslope	-0.8675	0.08874	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	8-14_6009 final	A	logic50	-9.261	0.03543	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	8-14_6009 final	A	Syx	5.035		4.936077	1.265377		17.64871	
Missouri	st3	8-14_6010 final	A	top	85.7	3.12	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	8-14_6010 final	A	bottom	-2.831	1.756	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	8-14_6010 final	A	hillslope	-0.8367	0.08497	-1.19633	0.040431	-2.25406	-0.13859	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st3	8-14_6010 final	A	logic50	-9.447	0.03986	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	8-14_6010 final	A	Syx	4.055		4.936077	1.265377		17.64871	
Missouri	st3	8-14_6011 final	A	top	110.7	3.328	107.8325	4.05509	56.33681	159.3281	
Missouri	st3	8-14_6011 final	A	bottom	4.716	2.517	1.054297	0.591684	-4.7575	6.866091	
Missouri	st3	8-14_6011 final	A	hillslope	-1.207	0.1457	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st3	8-14_6011 final	A	logic50	-8.979	0.03724	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st3	8-14_6011 final	A	Syx	6.095		4.936077	1.265377		17.64871	
Missouri	st4	2206	A	top	93.03	5.03	107.8325	4.05509	56.33681	159.3281	
Missouri	st4	2206	A	bottom	-2.724	2.472	1.054297	0.591684	-4.7575	6.866091	
Missouri	st4	2206	A	hillslope	-1.107	0.1812	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st4	2206	A	logic50	-9.623	0.05163	-8.923	0.083503	-9.57024	-8.27576	Below
Missouri	st4	2206	A	Syx	7.038		4.936077	1.265377		17.64871	
Missouri	st4	2210	A	top	86.51	6.731	107.8325	4.05509	56.33681	159.3281	
Missouri	st4	2210	A	bottom	-3.933	2.944	1.054297	0.591684	-4.7575	6.866091	
Missouri	st4	2210	A	hillslope	-1.187	0.2827	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st4	2210	A	logic50	-9.92	0.0748	-8.923	0.083503	-9.57024	-8.27576	Below
Missouri	st4	2210	A	Syx	8.602		4.936077	1.265377		17.64871	
Missouri	st4	2211	A	top	97.9	3.124	107.8325	4.05509	56.33681	159.3281	
Missouri	st4	2211	A	bottom	0.3753	1.861	1.054297	0.591684	-4.7575	6.866091	
Missouri	st4	2211	A	hillslope	-1.072	0.1125	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st4	2211	A	logic50	-9.288	0.03404	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st4	2211	A	Syx	4.893		4.936077	1.265377		17.64871	
Missouri	st4	2301	A	top	86.14	3.109	107.8325	4.05509	56.33681	159.3281	
Missouri	st4	2301	A	bottom	2.454	2.327	1.054297	0.591684	-4.7575	6.866091	
Missouri	st4	2301	A	hillslope	-1.007	0.1274	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st4	2301	A	logic50	-9.302	0.04234	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st4	2301	A	Syx	4.833		4.936077	1.265377		17.64871	
Missouri	st4	2302	A	top	97.29	3.337	107.8325	4.05509	56.33681	159.3281	
Missouri	st4	2302	A	bottom	-0.9259	2.127	1.054297	0.591684	-4.7575	6.866091	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	2302	A	hillslope	-1.427	0.1876	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st4	2302	A	logic50	-9.27	0.03649	-8.923	0.083503	-9.57024	-8.27576	
Missouri	st4	2302	A	Syx	6.179		4.936077	1.265377		17.64871	
Missouri	st4	2305	A	top	89.56	7.421	107.8325	4.05509	56.33681	159.3281	
Missouri	st4	2305	A	bottom	-5.812	3.427	1.054297	0.591684	-4.7575	6.866091	Below
Missouri	st4	2305	A	hillslope	-0.9243	0.2011	-1.19633	0.040431	-2.25406	-0.13859	
Missouri	st4	2305	A	logic50	-9.766	0.07677	-8.923	0.083503	-9.57024	-8.27576	Below
Missouri	st4	2305	A	Syx	8.385		4.936077	1.265377		17.64871	
Ceetox	st2	20090218	U	top	127.4	9.444	107.8325	4.05509	56.33681	159.3281	
Ceetox	st2	20090218	U	bottom	-1.478	6.412	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st2	20090218	U	hillslope	-0.6919	0.1537	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st2	20090218	U	logic50	-8.619	0.1012	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st2	20090218	U	Syx	11.7		4.936077	1.265377		17.64871	
Ceetox	st3	20090415	U	top	105.6	2.839	107.8325	4.05509	56.33681	159.3281	
Ceetox	st3	20090415	U	bottom	0.9289	1.429	1.054297	0.591684	-4.7575	6.866091	
Ceetox	st3	20090415	U	hillslope	-1.596	0.1616	-1.19633	0.040431	-2.25406	-0.13859	
Ceetox	st3	20090415	U	logic50	-9.548	0.02428	-8.923	0.083503	-9.57024	-8.27576	
Ceetox	st3	20090415	U	Syx	4.705		4.936077	1.265377		17.64871	
Freyberger	st2	A	U	top			107.8325	4.05509	56.33681	159.3281	
Freyberger	st2	A	U	bottom			1.054297	0.591684	-4.7575	6.866091	
Freyberger	st2	A	U	hillslope			-1.19633	0.040431	-2.25406	-0.13859	
Freyberger	st2	A	U	logic50			-8.923	0.083503	-9.57024	-8.27576	
Freyberger	st2	A	U	Syx			4.936077	1.265377		17.64871	
Lovelace	st1	8-Jan-09	U	top	152.2	79.51	107.8325	4.05509	56.33681	159.3281	
Lovelace	st1	8-Jan-09	U	bottom	0.1309	13.85	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st1	8-Jan-09	U	hillslope	-0.5458	0.3952	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st1	8-Jan-09	U	logic50	-9.432	0.2068	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st1	8-Jan-09	U	Syx	25.63		4.936077	1.265377		17.64871	Above
Lovelace	st1	31-Dec-08	U	top	88.52	33.56	107.8325	4.05509	56.33681	159.3281	

Laboratory	Sub Task	Test ID	Acceptability CERi, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st1	31-Dec-08	U	bottom	2.471	1.031	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st1	31-Dec-08	U	hillslope	-0.6067	0.143	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st1	31-Dec-08	U	logic50	-10.99	0.04368	-8.923	0.083503	-9.57024	-8.27576	Below
Lovelace	st1	31-Dec-08	U	Syx	2.301		4.936077	1.265377		17.64871	
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	top	241.6	8.755	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	bottom	9.212	5.415	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	hillslope	-0.9853	0.1193	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	logic50	-8.51	0.07021	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	Syx	13.45		4.936077	1.265377		17.64871	
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	top	465.5	105.6	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	bottom	-25.48	64.55	1.054297	0.591684	-4.7575	6.866091	Below
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	hillslope	-0.3174	0.1422	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	logic50	-6.645	0.2498	-8.923	0.083503	-9.57024	-8.27576	Above
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	Syx	30.97		4.936077	1.265377		17.64871	Above
Lovelace	st12	14May10_JCS 10-15-10b	U	top			107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	14May10_JCS 10-15-10b	U	bottom			1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	14May10_JCS 10-15-10b	U	hillslope			-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	14May10_JCS 10-15-10b	U	logic50			-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	14May10_JCS 10-15-10b	U	Syx			4.936077	1.265377		17.64871	
Lovelace	st12	A dil variations_04Dec-09	U	top	165	6.794	107.8325	4.05509	56.33681	159.3281	Above

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st12	A dil variations_04Dec-09	U	bottom	0.3958	3.926	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	A dil variations_04Dec-09	U	hillslope	-0.9661	0.1231	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	A dil variations_04Dec-09	U	logic50	-8.899	0.05278	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	A dil variations_04Dec-09	U	Syx	9.856		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_08-Dec-09	U	top	245.3	47.9	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st12	ABC Coded_08-Dec-09	U	bottom	-3.105	15.11	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_08-Dec-09	U	hillslope	-0.6061	0.2276	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_08-Dec-09	U	logic50	-8.694	0.1828	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_08-Dec-09	U	Syx	29.39		4.936077	1.265377		17.64871	Above
Lovelace	st12	ABC Coded_20-Oct-09 JCS	U	top	169	5.874	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st12	ABC Coded_20-Oct-09 JCS	U	bottom	1.46	3.854	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st12	ABC Coded_20-Oct-09 JCS	U	hillslope	-0.8791	0.09774	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_20-Oct-09 JCS	U	logic50	-8.621	0.05071	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_20-Oct-09 JCS	U	Syx	8.773		4.936077	1.265377		17.64871	
Lovelace	st12	ABC Coded_27-Oct-09	U	top	142.3	9.641	107.8325	4.05509	56.33681	159.3281	
Lovelace	st12	ABC Coded_27-Oct-09	U	bottom	20.38	6.886	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st12	ABC Coded_27-Oct-09	U	hillslope	-1.355	0.4379	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st12	ABC Coded_27-Oct-09	U	logic50	-8.721	0.1273	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st12	ABC Coded_27-Oct-09	U	Syx	18.75		4.936077	1.265377		17.64871	Above
Lovelace	st2	3-Mar-09	U	top	75.05	5.848	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	3-Mar-09	U	bottom	-0.5065	3.882	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	3-Mar-09	U	hillslope	-2.2	0.7717	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	3-Mar-09	U	logic50	-9.429	0.088	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	3-Mar-09	U	Syx	12.72		4.936077	1.265377		17.64871	
Lovelace	st2	5-Mar-09	U	top	279.6	10.36	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st2	5-Mar-09	U	bottom	7.151	6.12	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st2	5-Mar-09	U	hillslope	-0.9298	0.1085	-1.19633	0.040431	-2.25406	-0.13859	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	5-Mar-09	U	logic50	-8.447	0.0737	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	5-Mar-09	U	Syx	14.92		4.936077	1.265377		17.64871	
Lovelace	st2	7-May-09	U	top	7015	239.5	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st2	7-May-09	U	bottom	-30.28	218.1	1.054297	0.591684	-4.7575	6.866091	Below
Lovelace	st2	7-May-09	U	hillslope	-1.459	0.2381	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	7-May-09	U	logic50	-7.465	0.7192	-8.923	0.083503	-9.57024	-8.27576	Above
Lovelace	st2	7-May-09	U	Syx	559.3		4.936077	1.265377		17.64871	Above
Lovelace	st2	11-Mar-09	U	top	104.5	7.971	107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	11-Mar-09	U	bottom	-0.3333	11.27	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	11-Mar-09	U	hillslope			-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	11-Mar-09	U	logic50			-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	11-Mar-09	U	Syx	27.61		4.936077	1.265377		17.64871	Above
Lovelace	st2	17-Mar-09	U	top			107.8325	4.05509	56.33681	159.3281	
Lovelace	st2	17-Mar-09	U	bottom	1.886	33.86	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st2	17-Mar-09	U	hillslope	-0.4825	1.313	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st2	17-Mar-09	U	logic50	-9.431	2.988	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st2	17-Mar-09	U	Syx	89.15		4.936077	1.265377		17.64871	Above
Lovelace	st3	1-Jul-09	U	top	112.2	3.942	107.8325	4.05509	56.33681	159.3281	
Lovelace	st3	1-Jul-09	U	bottom	4.76	3.966	1.054297	0.591684	-4.7575	6.866091	
Lovelace	st3	1-Jul-09	U	hillslope	-2.882	0.7019	-1.19633	0.040431	-2.25406	-0.13859	Below
Lovelace	st3	1-Jul-09	U	logic50	-8.635	0.04795	-8.923	0.083503	-9.57024	-8.27576	
Lovelace	st3	1-Jul-09	U	Syx	11.5		4.936077	1.265377		17.64871	
Lovelace	st3	12-Jun-09	U	top	304.2	13.52	107.8325	4.05509	56.33681	159.3281	Above
Lovelace	st3	12-Jun-09	U	bottom	33.73	8.633	1.054297	0.591684	-4.7575	6.866091	Above
Lovelace	st3	12-Jun-09	U	hillslope	-1.095	0.1871	-1.19633	0.040431	-2.25406	-0.13859	
Lovelace	st3	12-Jun-09	U	logic50	-8.094	0.1784	-8.923	0.083503	-9.57024	-8.27576	Above
Lovelace	st3	12-Jun-09	U	Syx	22.38		4.936077	1.265377		17.64871	Above

Table B-2. CERi Assay, Parameter Estimates for the NE Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st1	20090207	A	top	96.28	0.9131	103.7112	2.882631	67.45486	139.9676	
Ceetox	st1	20090207	A	bottom	1.201	2.044	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st1	20090207	A	hillslope	-0.8593	0.04992	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st1	20090207	A	logic50	-5.94	0.01817	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st1	20090207	A	Syx	2.135		4.175418	1.214486		12.9219	
Ceetox	st1	20090208	A	top	94.59	1.039	103.7112	2.882631	67.45486	139.9676	
Ceetox	st1	20090208	A	bottom	2.706	2.431	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st1	20090208	A	hillslope	-0.9692	0.07316	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st1	20090208	A	logic50	-5.855	0.02243	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st1	20090208	A	Syx	2.731		4.175418	1.214486		12.9219	
Ceetox	st1	20090211	A	top	96.99	1.172	103.7112	2.882631	67.45486	139.9676	
Ceetox	st1	20090211	A	bottom	0.7085	3.192	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st1	20090211	A	hillslope	-0.9634	0.08718	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st1	20090211	A	logic50	-5.731	0.02628	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st1	20090211	A	Syx	3.157		4.175418	1.214486		12.9219	
Ceetox	st2	20090215	A	top	95.17	0.8505	103.7112	2.882631	67.45486	139.9676	
Ceetox	st2	20090215	A	bottom	6.145	1.751	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st2	20090215	A	hillslope	-1.129	0.07036	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st2	20090215	A	logic50	-5.897	0.01823	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st2	20090215	A	Syx	2.414		4.175418	1.214486		12.9219	
Ceetox	st2	20090221	A	top	98.11	1.096	103.7112	2.882631	67.45486	139.9676	
Ceetox	st2	20090221	A	bottom	4.209	1.783	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st2	20090221	A	hillslope	-0.9511	0.05709	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st2	20090221	A	logic50	-6.19	0.01967	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st2	20090221	A	Syx	2.52		4.175418	1.214486		12.9219	
Ceetox	st3	20090310A	A	top	94.71	0.7463	103.7112	2.882631	67.45486	139.9676	
Ceetox	st3	20090310A	A	bottom	2.213	1.819	2.480819	1.020515	-9.67042	14.63206	

Laboratory	Sub Task	Test ID	Acceptability CERI, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st3	20090310A	A	hillslope	-1.018	0.0582	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st3	20090310A	A	logic50	-5.801	0.01646	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st3	20090310A	A	Syx	2.058		4.175418	1.214486		12.9219	
Ceetox	st3	20090415	A	top	93.38	1.146	103.7112	2.882631	67.45486	139.9676	
Ceetox	st3	20090415	A	bottom	1.509	2.959	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st3	20090415	A	hillslope	-1.106	0.1079	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st3	20090415	A	logic50	-5.728	0.02627	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st3	20090415	A	Syx	3.389		4.175418	1.214486		12.9219	
Ceetox	st4	20090903A	A	top	96.4	0.9859	103.7112	2.882631	67.45486	139.9676	
Ceetox	st4	20090903A	A	bottom	3.846	2.721	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st4	20090903A	A	hillslope	-1.357	0.144	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st4	20090903A	A	logic50	-5.526	0.02498	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st4	20090903A	A	Syx	3.286		4.175418	1.214486		12.9219	
Ceetox	st4	20090905A	A	top	101	0.717	103.7112	2.882631	67.45486	139.9676	
Ceetox	st4	20090905A	A	bottom	3.176	1.618	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st4	20090905A	A	hillslope	-1.054	0.05252	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st4	20090905A	A	logic50	-5.794	0.01491	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st4	20090905A	A	Syx	1.995		4.175418	1.214486		12.9219	
Ceetox	st4	20090907A	A	top	135.5	4.099	103.7112	2.882631	67.45486	139.9676	
Ceetox	st4	20090907A	A	bottom	12.5	8.782	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st4	20090907A	A	hillslope	-1.309	0.3127	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st4	20090907A	A	logic50	-5.545	0.0866	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st4	20090907A	A	Syx	12.83		4.175418	1.214486		12.9219	
Ceetox	st4	20090930A	A	top	90.61	1.983	103.7112	2.882631	67.45486	139.9676	
Ceetox	st4	20090930A	A	bottom	14.38	5.406	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st4	20090930A	A	hillslope	-1.235	0.2877	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st4	20090930A	A	logic50	-5.539	0.06296	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st4	20090930A	A	Syx	6.312		4.175418	1.214486		12.9219	
Freyberger	st2	A	A	top	98.63	1.309	103.7112	2.882631	67.45486	139.9676	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st2	A	A	bottom	-0.328	1.983	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	A	A	hillslope	-0.8769	0.05508	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	A	A	logic50	-6.316	0.02109	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	A	A	Syx	2.732		4.175418	1.214486		12.9219	
Freyberger	st2	B	A	top	97.7	0.8614	103.7112	2.882631	67.45486	139.9676	
Freyberger	st2	B	A	bottom	-1.259	1.311	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	B	A	hillslope	-0.9546	0.04117	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	B	A	logic50	-6.32	0.01415	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	B	A	Syx	1.931		4.175418	1.214486		12.9219	
Freyberger	st2	C	A	top	96.84	1.518	103.7112	2.882631	67.45486	139.9676	
Freyberger	st2	C	A	bottom	-1.047	2.179	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	C	A	hillslope	-0.9619	0.07178	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	C	A	logic50	-6.392	0.02458	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	C	A	Syx	3.336		4.175418	1.214486		12.9219	
Freyberger	st2	D	A	top	95.48	1.035	103.7112	2.882631	67.45486	139.9676	
Freyberger	st2	D	A	bottom	-0.8012	1.371	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	D	A	hillslope	-1.022	0.05225	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	D	A	logic50	-6.489	0.01657	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	D	A	Syx	2.288		4.175418	1.214486		12.9219	
Freyberger	st2	E	A	top	100	1.188	103.7112	2.882631	67.45486	139.9676	
Freyberger	st2	E	A	bottom	-1.892	1.454	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	E	A	hillslope	-1.009	0.0534	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	E	A	logic50	-6.546	0.01724	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	E	A	Syx	2.509		4.175418	1.214486		12.9219	
Freyberger	st2	F	A	top	101	0.9325	103.7112	2.882631	67.45486	139.9676	
Freyberger	st2	F	A	bottom	-1.106	1.096	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	F	A	hillslope	-1.023	0.04183	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	F	A	logic50	-6.575	0.01326	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	F	A	Syx	1.949		4.175418	1.214486		12.9219	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st2	G	A	top	103.1	0.7529	103.7112	2.882631	67.45486	139.9676	
Freyberger	st2	G	A	bottom	-1.942	0.8883	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st2	G	A	hillslope	-1.017	0.0326	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st2	G	A	logic50	-6.56	0.01042	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st2	G	A	Syx	1.57		4.175418	1.214486		12.9219	
Freyberger	st3	CODE A2	A	top	99.82	0.6935	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE A2	A	bottom	-2.172	0.7855	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE A2	A	hillslope	-1.006	0.02979	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE A2	A	logic50	-6.634	0.009684	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE A2	A	Syx	1.407		4.175418	1.214486		12.9219	
Freyberger	st3	CODE A3	A	top	99.85	1.389	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE A3	A	bottom	-2.069	1.517	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE A3	A	hillslope	-0.9847	0.05669	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE A3	A	logic50	-6.674	0.01902	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE A3	A	Syx	2.727		4.175418	1.214486		12.9219	
Freyberger	st3	CODE B1	A	top	91.46	1.44	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE B1	A	bottom	-2.938	1.751	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE B1	A	hillslope	-0.9126	0.05968	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE B1	A	logic50	-6.654	0.0226	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE B1	A	Syx	2.812		4.175418	1.214486		12.9219	
Freyberger	st3	CODE B2	A	top	97.39	1.025	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE B2	A	bottom	-1.332	1.19	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE B2	A	hillslope	-0.978	0.04408	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE B2	A	logic50	-6.623	0.01493	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE B2	A	Syx	2.063		4.175418	1.214486		12.9219	
Freyberger	st3	CODE B3	A	top	101.6	0.9491	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE B3	A	bottom	-1.52	1.054	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE B3	A	hillslope	-0.8916	0.03318	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE B3	A	logic50	-6.636	0.01273	-6.18077	0.121397	-7.18919	-5.17235	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st3	CODE B3	A	Syx	1.741		4.175418	1.214486		12.9219	
Freyberger	st3	CODE C1	A	top	107.4	1.25	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE C1	A	bottom	-1.53	1.416	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE C1	A	hillslope	-0.9828	0.04847	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE C1	A	logic50	-6.566	0.01638	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE C1	A	Syx	2.494		4.175418	1.214486		12.9219	
Freyberger	st3	CODE C2	A	top	101	1.313	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE C2	A	bottom	-2.878	1.513	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE C2	A	hillslope	-0.9943	0.05486	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE C2	A	logic50	-6.612	0.01813	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE C2	A	Syx	2.665		4.175418	1.214486		12.9219	
Freyberger	st3	CODE C3	A	top	101.9	1.215	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE C3	A	bottom	-2.695	1.319	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE C3	A	hillslope	-0.964	0.04665	-1.0236	0.030484	-1.77482	-0.27237	
Freyberger	st3	CODE C3	A	logic50	-6.668	0.01612	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE C3	A	Syx	2.342		4.175418	1.214486		12.9219	
JapanCERi	st1	091224_01	A	top	97.85	1.77	103.7112	2.882631	67.45486	139.9676	
JapanCERi	st1	091224_01	A	bottom	-7.019	3.122	2.480819	1.020515	-9.67042	14.63206	
JapanCERi	st1	091224_01	A	hillslope	-0.721	0.05781	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERi	st1	091224_01	A	logic50	-6.283	0.02669	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERi	st1	091224_01	A	Syx	3.205		4.175418	1.214486		12.9219	
JapanCERi	st1	100107_02	A	top	97.09	2.03	103.7112	2.882631	67.45486	139.9676	
JapanCERi	st1	100107_02	A	bottom	-5.558	3.791	2.480819	1.020515	-9.67042	14.63206	
JapanCERi	st1	100107_02	A	hillslope	-0.8831	0.09485	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERi	st1	100107_02	A	logic50	-6.158	0.03453	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERi	st1	100107_02	A	Syx	4.619		4.175418	1.214486		12.9219	
JapanCERi	st1	100108_03	A	top	100.4	2.078	103.7112	2.882631	67.45486	139.9676	
JapanCERi	st1	100108_03	A	bottom	-4.651	3.879	2.480819	1.020515	-9.67042	14.63206	
JapanCERi	st1	100108_03	A	hillslope	-0.9335	0.1029	-1.0236	0.030484	-1.77482	-0.27237	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st1	100108_03	A	logic50	-6.102	0.03502	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st1	100108_03	A	Syx	4.961		4.175418	1.214486		12.9219	
JapanCERI	st2	100119_01	A	top	118.4	3.382	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st2	100119_01	A	bottom	10.77	5.338	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st2	100119_01	A	hillslope	-0.9635	0.1538	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st2	100119_01	A	logic50	-5.995	0.05999	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st2	100119_01	A	Syx	7.757		4.175418	1.214486		12.9219	
JapanCERI	st2	100126_02	A	top	104	3.026	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st2	100126_02	A	bottom	9.629	4.537	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st2	100126_02	A	hillslope	-1.285	0.2343	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st2	100126_02	A	logic50	-6.198	0.05471	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st2	100126_02	A	Syx	8.116		4.175418	1.214486		12.9219	
JapanCERI	st2	100129_03	A	top	100.5	1.158	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st2	100129_03	A	bottom	9.638	1.636	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st2	100129_03	A	hillslope	-1.194	0.08114	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st2	100129_03	A	logic50	-6.287	0.02087	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st2	100129_03	A	Syx	2.906		4.175418	1.214486		12.9219	
JapanCERI	st3	100203_01	A	top	139.6	2.335	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100203_01	A	bottom	3.755	3.27	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100203_01	A	hillslope	-1.019	0.08563	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100203_01	A	logic50	-6.098	0.03202	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100203_01	A	Syx	5.29		4.175418	1.214486		12.9219	
JapanCERI	st3	100208_02	A	top	134.2	2.188	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100208_02	A	bottom	-2.033	3.03	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100208_02	A	hillslope	-0.9541	0.07199	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100208_02	A	logic50	-6.174	0.0277	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100208_02	A	Syx	4.701		4.175418	1.214486		12.9219	
JapanCERI	st3	100215_03	A	top	103.4	1.083	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100215_03	A	bottom	11.4	1.418	2.480819	1.020515	-9.67042	14.63206	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	100215_03	A	hillslope	-1.135	0.06695	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100215_03	A	logic50	-6.331	0.01898	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100215_03	A	Syx	2.546		4.175418	1.214486		12.9219	
JapanCERI	st3	100223_04	A	top	95.98	1.279	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100223_04	A	bottom	11.01	1.655	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100223_04	A	hillslope	-1.11	0.08215	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100223_04	A	logic50	-6.403	0.02335	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100223_04	A	Syx	2.951		4.175418	1.214486		12.9219	
JapanCERI	st3	100224_05	A	top	111.1	1.152	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100224_05	A	bottom	9.151	1.517	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100224_05	A	hillslope	-1.046	0.05678	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100224_05	A	logic50	-6.282	0.01863	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100224_05	A	Syx	2.58		4.175418	1.214486		12.9219	
JapanCERI	st3	100225_06	A	top	94.95	0.7996	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100225_06	A	bottom	8.046	1.07	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100225_06	A	hillslope	-1.173	0.05567	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100225_06	A	logic50	-6.405	0.01436	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100225_06	A	Syx	1.937		4.175418	1.214486		12.9219	
JapanCERI	st3	100226_07	A	top	98.47	1.227	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100226_07	A	bottom	8.09	1.717	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100226_07	A	hillslope	-1.37	0.1069	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100226_07	A	logic50	-6.332	0.02171	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100226_07	A	Syx	3.29		4.175418	1.214486		12.9219	
JapanCERI	st3	100301_08	A	top	91.93	1.105	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100301_08	A	bottom	3.591	2.202	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100301_08	A	hillslope	-0.8333	0.05743	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100301_08	A	logic50	-6.08	0.0221	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100301_08	A	Syx	2.429		4.175418	1.214486		12.9219	
JapanCERI	st3	100303_09	A	top	109.3	1.693	103.7112	2.882631	67.45486	139.9676	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	100303_09	A	bottom	2.993	3.292	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100303_09	A	hillslope	-1.057	0.1022	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100303_09	A	logic50	-5.896	0.03084	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100303_09	A	Syx	4.511		4.175418	1.214486		12.9219	
JapanCERI	st3	100305_10	A	top	96.27	1.044	103.7112	2.882631	67.45486	139.9676	
JapanCERI	st3	100305_10	A	bottom	10.33	1.984	2.480819	1.020515	-9.67042	14.63206	
JapanCERI	st3	100305_10	A	hillslope	-0.9508	0.0657	-1.0236	0.030484	-1.77482	-0.27237	
JapanCERI	st3	100305_10	A	logic50	-5.97	0.02257	-6.18077	0.121397	-7.18919	-5.17235	
JapanCERI	st3	100305_10	A	Syx	2.546		4.175418	1.214486		12.9219	
Lovelace	st1	8-Jan-09	A	top	129.2	3.874	103.7112	2.882631	67.45486	139.9676	
Lovelace	st1	8-Jan-09	A	bottom	-2.478	6.22	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st1	8-Jan-09	A	hillslope	-0.8036	0.1117	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st1	8-Jan-09	A	logic50	-6.027	0.05241	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st1	8-Jan-09	A	Syx	7.628		4.175418	1.214486		12.9219	
Lovelace	st1	13-Jan-09	A	top	106	2.212	103.7112	2.882631	67.45486	139.9676	
Lovelace	st1	13-Jan-09	A	bottom	4.209	4.018	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st1	13-Jan-09	A	hillslope	-0.9151	0.1078	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st1	13-Jan-09	A	logic50	-6.002	0.0397	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st1	13-Jan-09	A	Syx	5.143		4.175418	1.214486		12.9219	
Lovelace	st1	16-Jan-09	A	top	90.95	1.971	103.7112	2.882631	67.45486	139.9676	
Lovelace	st1	16-Jan-09	A	bottom	-4.838	3.792	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st1	16-Jan-09	A	hillslope	-0.8641	0.09744	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st1	16-Jan-09	A	logic50	-6.199	0.03647	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st1	16-Jan-09	A	Syx	4.438		4.175418	1.214486		12.9219	
Lovelace	st12	ABC Coded_12-Nov-09	A	top	96.86	2.655	103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	ABC Coded_12-Nov-09	A	bottom	7.114	5.749	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_12-Nov-09	A	hillslope	-0.9844	0.1851	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_12-Nov-09	A	logic50	-5.857	0.05841	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_12-Nov-09	A	Syx	6.934		4.175418	1.214486		12.9219	

Laboratory	Sub Task	Test ID	Acceptability CERI, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st12	ABC Coded_23-Sep-09	A	top	128.9	4.224	103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	ABC Coded_23-Sep-09	A	bottom	11.28	7.69	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_23-Sep-09	A	hillslope	-1.557	0.3936	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_23-Sep-09	A	logic50	-5.827	0.07434	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_23-Sep-09	A	Syx	13.3		4.175418	1.214486		12.9219	Above
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	top	102.5	2.322	103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	bottom	2.996	3.97	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	hillslope	-0.9413	0.116	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	logic50	-6.107	0.04059	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_7-Apr-10 #1	A	Syx	5.403		4.175418	1.214486		12.9219	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	top	98.91	2.104	103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	bottom	6.769	3.388	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	hillslope	-1.014	0.1218	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	logic50	-6.166	0.03897	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_7-Apr-10 #2	A	Syx	5.054		4.175418	1.214486		12.9219	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	top	109.9	2.227	103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	bottom	0.1532	3.261	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	hillslope	-0.7911	0.07128	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	logic50	-6.245	0.03188	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_7-Apr-10 #3+triton	A	Syx	4.161		4.175418	1.214486		12.9219	
Lovelace	st2	4-May-09	A	top	127.2	3.786	103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	4-May-09	A	bottom	-0.5801	8.416	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	4-May-09	A	hillslope	-0.8255	0.144	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	4-May-09	A	logic50	-5.71	0.06536	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	4-May-09	A	Syx	8.494		4.175418	1.214486		12.9219	
Lovelace	st2	5-May-09	A	top	90.58	2.59	103.7112	2.882631	67.45486	139.9676	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	5-May-09	A	bottom	6.066	5.364	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	5-May-09	A	hillslope	-1.061	0.2072	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	5-May-09	A	logic50	-5.952	0.05781	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	5-May-09	A	Syx	7.066		4.175418	1.214486		12.9219	
Lovelace	st2	6-May-09	A	top	151.6	3.131	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st2	6-May-09	A	bottom	-12.24	7.516	2.480819	1.020515	-9.67042	14.63206	Below
Lovelace	st2	6-May-09	A	hillslope	-0.7215	0.07895	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	6-May-09	A	logic50	-5.621	0.0435	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	6-May-09	A	Syx	6.173		4.175418	1.214486		12.9219	
Lovelace	st2	8-May-09	A	top	120.4	7.842	103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	8-May-09	A	bottom	-7.09	35.45	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	8-May-09	A	hillslope	-0.7261	0.3681	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	8-May-09	A	logic50	-5.393	0.1793	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	8-May-09	A	Syx	17.13		4.175418	1.214486		12.9219	Above
Lovelace	st2	17-Mar-09	A	top	108.6	3.119	103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	17-Mar-09	A	bottom	1.122	4.755	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	17-Mar-09	A	hillslope	-1.301	0.2173	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	17-Mar-09	A	logic50	-6.214	0.04875	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	17-Mar-09	A	Syx	8.482		4.175418	1.214486		12.9219	
Lovelace	st2	26-Feb-09	A	top	106.7	9.223	103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	26-Feb-09	A	bottom	12.4	9.787	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	26-Feb-09	A	hillslope	-0.8752	0.3349	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	26-Feb-09	A	logic50	-6.482	0.1412	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	26-Feb-09	A	Syx	16.3		4.175418	1.214486		12.9219	Above
Lovelace	st2	27-Feb-09	A	top	134.5	6.488	103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	27-Feb-09	A	bottom	15.88	8.668	2.480819	1.020515	-9.67042	14.63206	Above
Lovelace	st2	27-Feb-09	A	hillslope	-0.9564	0.2414	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	27-Feb-09	A	logic50	-6.022	0.1093	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	27-Feb-09	A	Syx	13.73		4.175418	1.214486		12.9219	Above

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	1-Jul-09	A	top	133.3	2.473	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	1-Jul-09	A	bottom	9.744	4.068	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	1-Jul-09	A	hillslope	-0.9787	0.1028	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	1-Jul-09	A	logic50	-5.874	0.04201	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	1-Jul-09	A	Syx	5.841		4.175418	1.214486		12.9219	
Lovelace	st3	1-Jun-09	A	top	106.5	5.324	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	1-Jun-09	A	bottom	-2.054	8.849	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	1-Jun-09	A	hillslope	-0.9864	0.2564	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	1-Jun-09	A	logic50	-6.149	0.08428	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	1-Jun-09	A	Syx	12.7		4.175418	1.214486		12.9219	
Lovelace	st3	4-Jun-09	A	top	110.8	1.862	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	4-Jun-09	A	bottom	3.913	3.107	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	4-Jun-09	A	hillslope	-0.9224	0.08276	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	4-Jun-09	A	logic50	-6.057	0.03106	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	4-Jun-09	A	Syx	4.221		4.175418	1.214486		12.9219	
Lovelace	st3	8-Jun-09	A	top	108	3.45	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	8-Jun-09	A	bottom	7.854	5.861	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	8-Jun-09	A	hillslope	-0.8701	0.1521	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	8-Jun-09	A	logic50	-6.019	0.06235	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	8-Jun-09	A	Syx	7.486		4.175418	1.214486		12.9219	
Lovelace	st3	10-Jul-09	A	top	112.4	1.672	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	10-Jul-09	A	bottom	-8.031	3.515	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	10-Jul-09	A	hillslope	-0.7327	0.0542	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	10-Jul-09	A	logic50	-5.975	0.02487	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	10-Jul-09	A	Syx	3.249		4.175418	1.214486		12.9219	
Lovelace	st3	10-Jun-09	A	top	116.9	1.91	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	10-Jun-09	A	bottom	0.389	3.198	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	10-Jun-09	A	hillslope	-0.831	0.06705	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	10-Jun-09	A	logic50	-6.044	0.02897	-6.18077	0.121397	-7.18919	-5.17235	

Laboratory	Sub Task	Test ID	Acceptability CERI, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	10-Jun-09	A	Syx	3.949		4.175418	1.214486		12.9219	
Lovelace	st3	11-Jun-09	A	top	134.3	2.186	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	11-Jun-09	A	bottom	3.828	3.643	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	11-Jun-09	A	hillslope	-0.8743	0.07357	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	11-Jun-09	A	logic50	-5.898	0.03341	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	11-Jun-09	A	Syx	4.729		4.175418	1.214486		12.9219	
Lovelace	st3	15-Jun-09	A	top	116.7	3.711	103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	15-Jun-09	A	bottom	5.323	6.178	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	15-Jun-09	A	hillslope	-0.8497	0.1403	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	15-Jun-09	A	logic50	-5.998	0.06108	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	15-Jun-09	A	Syx	7.819		4.175418	1.214486		12.9219	
Missouri	st1	4001 2m	A	top	103.7	2.701	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4001 2m	A	bottom	0.5439	5.112	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4001 2m	A	hillslope	-0.8357	0.1167	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	4001 2m	A	logic50	-6.033	0.04655	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4001 2m	A	Syx	5.86		4.175418	1.214486		12.9219	
Missouri	st1	4001 final	A	top	107.4	2.183	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4001 final	A	bottom	2.025	4.022	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4001 final	A	hillslope	-0.8993	0.1011	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	4001 final	A	logic50	-6	0.0378	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4001 final	A	Syx	5.025		4.175418	1.214486		12.9219	
Missouri	st1	4002 final	A	top	101.1	1.684	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4002 final	A	bottom	1.257	3.122	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4002 final	A	hillslope	-1.014	0.09853	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	4002 final	A	logic50	-6.034	0.03049	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4002 final	A	Syx	4.281		4.175418	1.214486		12.9219	
Missouri	st1	4003 final	A	top	113.6	5.61	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4003 final	A	bottom	10.18	9.869	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4003 final	A	hillslope	-1.087	0.3381	-1.0236	0.030484	-1.77482	-0.27237	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st1	4003 final	A	logic50	-5.919	0.1068	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4003 final	A	Syx	14.66		4.175418	1.214486		12.9219	Above
Missouri	st1	4005 final	A	top	104.7	3.171	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4005 final	A	bottom	-3.781	7.638	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4005 final	A	hillslope	-0.7609	0.1316	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	4005 final	A	logic50	-5.886	0.05612	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4005 final	A	Syx	6.65		4.175418	1.214486		12.9219	
Missouri	st1	4006 final	A	top	100.9	2.341	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4006 final	A	bottom	2.717	4.757	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4006 final	A	hillslope	-1.099	0.1674	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	4006 final	A	logic50	-5.902	0.04556	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4006 final	A	Syx	6.503		4.175418	1.214486		12.9219	
Missouri	st1	4007 final	A	top	95.21	2.747	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	4007 final	A	bottom	0.438	6.587	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	4007 final	A	hillslope	-0.9226	0.1606	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	4007 final	A	logic50	-6.023	0.05329	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	4007 final	A	Syx	6.659		4.175418	1.214486		12.9219	
Missouri	st1	5003 stds only w2	A	top	99.19	5.735	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	5003 stds only w2	A	bottom	9.199	7.013	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	5003 stds only w2	A	hillslope	-0.8534	0.2262	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	5003 stds only w2	A	logic50	-6.438	0.09327	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	5003 stds only w2	A	Syx	10.62		4.175418	1.214486		12.9219	
Missouri	st1	5007 stds only NE	A	top	104	2.544	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	5007 stds only NE	A	bottom	6.313	3.969	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	5007 stds only NE	A	hillslope	-0.9358	0.1214	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	5007 stds only NE	A	logic50	-6.163	0.04412	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	5007 stds only NE	A	Syx	5.675		4.175418	1.214486		12.9219	
Missouri	st1	5010 stds only w2	A	top	99.46	1.065	103.7112	2.882631	67.45486	139.9676	
Missouri	st1	5010 stds only w2	A	bottom	-1.499	1.139	2.480819	1.020515	-9.67042	14.63206	

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Missouri	st1	5010 stds only w2	A	hillslope	-1.063	0.04894	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	5010 stds only w2	A	logic50	-6.694	0.01469	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	5010 stds only w2	A	Syx	2.182		4.175418	1.214486		12.9219	
Missouri	st2	5006 no del	A	top	97.13	2.417	103.7112	2.882631	67.45486	139.9676	
Missouri	st2	5006 no del	A	bottom	0.8222	4.327	2.480819	1.020515	-9.67042	14.63206	
Missouri	st2	5006 no del	A	hillslope	-1.103	0.1615	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st2	5006 no del	A	logic50	-6.1	0.04449	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st2	5006 no del	A	Syx	6.419		4.175418	1.214486		12.9219	
Missouri	st2	5008 default	A	top	98.77	2.215	103.7112	2.882631	67.45486	139.9676	
Missouri	st2	5008 default	A	bottom	5.326	4.301	2.480819	1.020515	-9.67042	14.63206	
Missouri	st2	5008 default	A	hillslope	-1.329	0.2113	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st2	5008 default	A	logic50	-5.926	0.04363	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st2	5008 default	A	Syx	6.724		4.175418	1.214486		12.9219	
Missouri	st2	5009 no deletion	A	top	110.1	1.91	103.7112	2.882631	67.45486	139.9676	
Missouri	st2	5009 no deletion	A	bottom	-1.819	4.729	2.480819	1.020515	-9.67042	14.63206	
Missouri	st2	5009 no deletion	A	hillslope	-0.9623	0.1138	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st2	5009 no deletion	A	logic50	-5.716	0.03724	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st2	5009 no deletion	A	Syx	5.055		4.175418	1.214486		12.9219	
Missouri	st3	1-7_6005 final	A	top	107.2	2.341	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	1-7_6005 final	A	bottom	-2.504	4.605	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	1-7_6005 final	A	hillslope	-0.9897	0.1114	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	1-7_6005 final	A	logic50	-6.632	0.03024	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	1-7_6005 final	A	Syx	4.345		4.175418	1.214486		12.9219	
Missouri	st3	1-7_6006 final	A	top	94.29	2.937	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	1-7_6006 final	A	bottom	8.546	3.607	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	1-7_6006 final	A	hillslope	-1.534	0.2728	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	1-7_6006 final	A	logic50	-6.752	0.04613	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	1-7_6006 final	A	Syx	7.067		4.175418	1.214486		12.9219	
Missouri	st3	1-7_6007 final	A	top	107.5	2.586	103.7112	2.882631	67.45486	139.9676	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st3	1-7_6007 final	A	bottom	0.4982	4.759	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	1-7_6007 final	A	hillslope	-1.154	0.1553	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	1-7_6007 final	A	logic50	-6.598	0.03523	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	1-7_6007 final	A	Syx	5.434		4.175418	1.214486		12.9219	
Missouri	st3	6502 final	A	top	102.4	4.543	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	6502 final	A	bottom	-0.7623	8.73	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	6502 final	A	hillslope	-0.9926	0.2557	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	6502 final	A	logic50	-6.005	0.08068	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	6502 final	A	Syx	11.51		4.175418	1.214486		12.9219	
Missouri	st3	6503 final	A	top	96.59	3.634	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	6503 final	A	bottom	-0.1095	4.316	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	6503 final	A	hillslope	-1.157	0.2101	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	6503 final	A	logic50	-6.589	0.05529	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	6503 final	A	Syx	8.253		4.175418	1.214486		12.9219	
Missouri	st3	6504 final	A	top	87.49	2.923	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	6504 final	A	bottom	3.782	5.399	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	6504 final	A	hillslope	-1.4	0.3261	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	6504 final	A	logic50	-6.082	0.06232	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	6504 final	A	Syx	8.894		4.175418	1.214486		12.9219	
Missouri	st3	8-14_6009 final	A	top	88.51	2.796	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	8-14_6009 final	A	bottom	0.1349	3.2	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	8-14_6009 final	A	hillslope	-1.397	0.2349	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	8-14_6009 final	A	logic50	-6.675	0.04662	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	8-14_6009 final	A	Syx	6.902		4.175418	1.214486		12.9219	
Missouri	st3	8-14_6010 final	A	top	83.85	2.936	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	8-14_6010 final	A	bottom	-0.08222	3.079	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	8-14_6010 final	A	hillslope	-0.9721	0.1398	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	8-14_6010 final	A	logic50	-6.873	0.05063	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	8-14_6010 final	A	Syx	5.598		4.175418	1.214486		12.9219	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st3	8-14_6011 final	A	top	107.2	3.792	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	8-14_6011 final	A	bottom	8.431	8.436	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	8-14_6011 final	A	hillslope	-1.137	0.2641	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	8-14_6011 final	A	logic50	-6.425	0.06233	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st3	8-14_6011 final	A	Syx	8.213		4.175418	1.214486		12.9219	
Missouri	st4	2206	A	top	96.23	3.468	103.7112	2.882631	67.45486	139.9676	
Missouri	st4	2206	A	bottom	-3.815	3.3	2.480819	1.020515	-9.67042	14.63206	
Missouri	st4	2206	A	hillslope	-0.8625	0.1099	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st4	2206	A	logic50	-6.88	0.04455	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st4	2206	A	Syx	5.734		4.175418	1.214486		12.9219	
Missouri	st4	2210	A	top	94.34	4.082	103.7112	2.882631	67.45486	139.9676	
Missouri	st4	2210	A	bottom	-6.481	3.261	2.480819	1.020515	-9.67042	14.63206	
Missouri	st4	2210	A	hillslope	-1.167	0.1856	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st4	2210	A	logic50	-7.054	0.04933	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st4	2210	A	Syx	7.517		4.175418	1.214486		12.9219	
Missouri	st4	2211	A	top	91.42	2.128	103.7112	2.882631	67.45486	139.9676	
Missouri	st4	2211	A	bottom	1.019	2.157	2.480819	1.020515	-9.67042	14.63206	
Missouri	st4	2211	A	hillslope	-1.407	0.1644	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st4	2211	A	logic50	-6.786	0.0324	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st4	2211	A	Syx	4.986		4.175418	1.214486		12.9219	
Missouri	st4	2301	A	top	83.63	4.119	103.7112	2.882631	67.45486	139.9676	
Missouri	st4	2301	A	bottom	7.804	4.57	2.480819	1.020515	-9.67042	14.63206	
Missouri	st4	2301	A	hillslope	-1.085	0.2649	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st4	2301	A	logic50	-6.727	0.07855	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st4	2301	A	Syx	8.7		4.175418	1.214486		12.9219	
Missouri	st4	2302	A	top	98.03	2.712	103.7112	2.882631	67.45486	139.9676	
Missouri	st4	2302	A	bottom	-0.965	2.406	2.480819	1.020515	-9.67042	14.63206	
Missouri	st4	2302	A	hillslope	-1.071	0.1171	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st4	2302	A	logic50	-6.905	0.03479	-6.18077	0.121397	-7.18919	-5.17235	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	2302	A	Syx	5.08		4.175418	1.214486		12.9219	
Missouri	st4	2305	A	top	79.57	5.721	103.7112	2.882631	67.45486	139.9676	
Missouri	st4	2305	A	bottom	7.677	5.342	2.480819	1.020515	-9.67042	14.63206	
Missouri	st4	2305	A	hillslope	-1.52	0.6038	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st4	2305	A	logic50	-6.939	0.1077	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st4	2305	A	Syx	13.33		4.175418	1.214486		12.9219	Above
Ceetox	st2	20090218	U	top	111.8	22.03	103.7112	2.882631	67.45486	139.9676	
Ceetox	st2	20090218	U	bottom	-6366	573251	2.480819	1.020515	-9.67042	14.63206	Below
Ceetox	st2	20090218	U	hillslope	-0.2534	0.3259	-1.0236	0.030484	-1.77482	-0.27237	Above
Ceetox	st2	20090218	U	logic50	-5.458	0.1451	-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st2	20090218	U	Syx	10.35		4.175418	1.214486		12.9219	
Ceetox	st3	20090228A	U	top	101.2	0.9478	103.7112	2.882631	67.45486	139.9676	
Ceetox	st3	20090228A	U	bottom			2.480819	1.020515	-9.67042	14.63206	
Ceetox	st3	20090228A	U	hillslope			-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st3	20090228A	U	logic50			-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st3	20090228A	U	Syx	3.669		4.175418	1.214486		12.9219	
Ceetox	st3	20090305A	U	top	106.5	1.628	103.7112	2.882631	67.45486	139.9676	
Ceetox	st3	20090305A	U	bottom			2.480819	1.020515	-9.67042	14.63206	
Ceetox	st3	20090305A	U	hillslope			-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st3	20090305A	U	logic50			-6.18077	0.121397	-7.18919	-5.17235	
Ceetox	st3	20090305A	U	Syx	6.3		4.175418	1.214486		12.9219	
Ceetox	st3	20090401A	U	top	104.7	1.002	103.7112	2.882631	67.45486	139.9676	
Ceetox	st3	20090401A	U	bottom	3.905	35.94	2.480819	1.020515	-9.67042	14.63206	
Ceetox	st3	20090401A	U	hillslope	-0.95	0.2703	-1.0236	0.030484	-1.77482	-0.27237	
Ceetox	st3	20090401A	U	logic50	-4.755	0.07544	-6.18077	0.121397	-7.18919	-5.17235	Above
Ceetox	st3	20090401A	U	Syx	2.934		4.175418	1.214486		12.9219	
Freyberger	st3	CODE A1	U	top	69.01	7.757	103.7112	2.882631	67.45486	139.9676	
Freyberger	st3	CODE A1	U	bottom	1.745	11.05	2.480819	1.020515	-9.67042	14.63206	
Freyberger	st3	CODE A1	U	hillslope	-1.734	1.314	-1.0236	0.030484	-1.77482	-0.27237	

Laboratory	Sub Task	Test ID	Acceptability CERi, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st3	CODE A1	U	logic50	-6.588	0.2222	-6.18077	0.121397	-7.18919	-5.17235	
Freyberger	st3	CODE A1	U	Syx	23.09		4.175418	1.214486		12.9219	Above
Lovelace	st1	6-Jan-09	U	top	191.5	4.847	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st1	6-Jan-09	U	bottom	-4.775	8.932	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st1	6-Jan-09	U	hillslope	-0.7801	0.09763	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st1	6-Jan-09	U	logic50	-5.59	0.0597	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st1	6-Jan-09	U	Syx	9.716		4.175418	1.214486		12.9219	
Lovelace	st1	31-Dec-08	U	top	58.7	1.206	103.7112	2.882631	67.45486	139.9676	Below
Lovelace	st1	31-Dec-08	U	bottom	3.909	2.279	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st1	31-Dec-08	U	hillslope	-0.8879	0.1072	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st1	31-Dec-08	U	logic50	-6.878	0.0702	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st1	31-Dec-08	U	Syx	2.768		4.175418	1.214486		12.9219	
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	top	234.3	4.935	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	bottom	33.78	8.228	2.480819	1.020515	-9.67042	14.63206	Above
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	hillslope	-1.192	0.1697	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	logic50	-5.28	0.1304	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	14May10_Additional Dilution CERi charcoal with CERi SOLVENT	U	Syx	13.33		4.175418	1.214486		12.9219	Above
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	top			103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	bottom			2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	hillslope			-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	14May10_Additional Dilution+FWA Char A only	U	logic50			-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	14May10_Additional	U	Syx			4.175418	1.214486		12.9219	

Laboratory	Sub Task	Test ID	Acceptability CERI, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
		Dilution+FWA Char A only									
Lovelace	st12	A dil variations_04Dec-09	U	top			103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	A dil variations_04Dec-09	U	bottom	7.286	1.507	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	A dil variations_04Dec-09	U	hillslope			-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	A dil variations_04Dec-09	U	logic50			-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	A dil variations_04Dec-09	U	Syx	5.835		4.175418	1.214486		12.9219	
Lovelace	st12	ABC Coded_08-Dec-09	U	top	149.1	2.641	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st12	ABC Coded_08-Dec-09	U	bottom	18.31	4.71	2.480819	1.020515	-9.67042	14.63206	Above
Lovelace	st12	ABC Coded_08-Dec-09	U	hillslope	-1.006	0.1136	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_08-Dec-09	U	logic50	-5.609	0.05362	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_08-Dec-09	U	Syx	6.578		4.175418	1.214486		12.9219	
Lovelace	st12	ABC Coded_27-Oct-09	U	top	166.4	14.92	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st12	ABC Coded_27-Oct-09	U	bottom	-0.2932	43.24	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_27-Oct-09	U	hillslope	-0.544	0.2644	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_27-Oct-09	U	logic50	-5.179	0.2095	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_27-Oct-09	U	Syx	20.76		4.175418	1.214486		12.9219	Above
Lovelace	st12	ABC Coded_29	U	top	121.4	9.715	103.7112	2.882631	67.45486	139.9676	
Lovelace	st12	ABC Coded_29	U	bottom	20.13	10.65	2.480819	1.020515	-9.67042	14.63206	Above
Lovelace	st12	ABC Coded_29	U	hillslope	-1.074	0.4576	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_29	U	logic50	-6.297	0.1712	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_29	U	Syx	20.27		4.175418	1.214486		12.9219	Above
Lovelace	st12	ABC Coded_29-Jan-10	U	top	167.1	13.83	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st12	ABC Coded_29-Jan-10	U	bottom	0.8449	24.73	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st12	ABC Coded_29-Jan-10	U	hillslope	-0.6491	0.2458	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st12	ABC Coded_29-Jan-10	U	logic50	-5.609	0.1775	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st12	ABC Coded_29-Jan-10	U	Syx	22.06		4.175418	1.214486		12.9219	Above
Lovelace	st2	3-Mar-09	U	top	107.1	8.364	103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	3-Mar-09	U	bottom	-4.838	8.499	2.480819	1.020515	-9.67042	14.63206	

Laboratory	Sub Task	Test ID	Acceptability CERI, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	3-Mar-09	U	hillslope	-0.6481	0.1618	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	3-Mar-09	U	logic50	-6.707	0.08732	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	3-Mar-09	U	Syx	10.58		4.175418	1.214486		12.9219	
Lovelace	st2	5-Mar-09	U	top	237.7	24.15	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st2	5-Mar-09	U	bottom	0.1382	34.51	2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	5-Mar-09	U	hillslope	-0.6561	0.2685	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	5-Mar-09	U	logic50	-5.517	0.2336	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	5-Mar-09	U	Syx	36.1		4.175418	1.214486		12.9219	Above
Lovelace	st2	7-May-09	U	top			103.7112	2.882631	67.45486	139.9676	
Lovelace	st2	7-May-09	U	bottom			2.480819	1.020515	-9.67042	14.63206	
Lovelace	st2	7-May-09	U	hillslope			-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	7-May-09	U	logic50			-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	7-May-09	U	Syx			4.175418	1.214486		12.9219	
Lovelace	st2	11-Mar-09	U	top	254.7	750.7	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st2	11-Mar-09	U	bottom	-1.49E+07	5.41E+12	2.480819	1.020515	-9.67042	14.63206	Below
Lovelace	st2	11-Mar-09	U	hillslope	-0.07932	0.6872	-1.0236	0.030484	-1.77482	-0.27237	Above
Lovelace	st2	11-Mar-09	U	logic50	-5.715	0.2391	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	11-Mar-09	U	Syx	27.15		4.175418	1.214486		12.9219	Above
Lovelace	st2	27-Mar-09	U	top	220.7	7.493	103.7112	2.882631	67.45486	139.9676	Above
Lovelace	st2	27-Mar-09	U	bottom	15.05	11.61	2.480819	1.020515	-9.67042	14.63206	Above
Lovelace	st2	27-Mar-09	U	hillslope	-1.146	0.2279	-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st2	27-Mar-09	U	logic50	-5.658	0.1063	-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st2	27-Mar-09	U	Syx	19.16		4.175418	1.214486		12.9219	Above
Lovelace	st3	12-Jun-09	U	top			103.7112	2.882631	67.45486	139.9676	
Lovelace	st3	12-Jun-09	U	bottom			2.480819	1.020515	-9.67042	14.63206	
Lovelace	st3	12-Jun-09	U	hillslope			-1.0236	0.030484	-1.77482	-0.27237	
Lovelace	st3	12-Jun-09	U	logic50			-6.18077	0.121397	-7.18919	-5.17235	
Lovelace	st3	12-Jun-09	U	Syx			4.175418	1.214486		12.9219	
Missouri	st1	5005 stds only w1	U	top	108.8	4.13	103.7112	2.882631	67.45486	139.9676	

Laboratory	Sub Task	Test ID	Acceptability CERI, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st1	5005 stds only w1	U	bottom	-3.313	8.179	2.480819	1.020515	-9.67042	14.63206	
Missouri	st1	5005 stds only w1	U	hillslope	-0.6556	0.1171	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st1	5005 stds only w1	U	logic50	-6.034	0.06118	-6.18077	0.121397	-7.18919	-5.17235	
Missouri	st1	5005 stds only w1	U	Syx	6.883		4.175418	1.214486		12.9219	
Missouri	st3	1-7_6001 final	U	top	106.7	2.819	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	1-7_6001 final	U	bottom	3.695	1.655	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	1-7_6001 final	U	hillslope	-1.19	0.1155	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	1-7_6001 final	U	logic50	-7.78	0.02149	-6.18077	0.121397	-7.18919	-5.17235	Below
Missouri	st3	1-7_6001 final	U	Syx	3.264		4.175418	1.214486		12.9219	
Missouri	st3	1-7_6002 final	U	top	92.34	4.826	103.7112	2.882631	67.45486	139.9676	
Missouri	st3	1-7_6002 final	U	bottom	2.384	3.649	2.480819	1.020515	-9.67042	14.63206	
Missouri	st3	1-7_6002 final	U	hillslope	-1.627	0.3676	-1.0236	0.030484	-1.77482	-0.27237	
Missouri	st3	1-7_6002 final	U	logic50	-7.344	0.05551	-6.18077	0.121397	-7.18919	-5.17235	Below
Missouri	st3	1-7_6002 final	U	Syx	9.184		4.175418	1.214486		12.9219	

Table B-3. FWA Assay, Parameter Estimates for the E2 Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st1	Run20081123	A	top	93.84	2.893	101.5967	0.923307	89.13837	114.0549	
Ceetox	st1	Run20081123	A	bottom	2.026	2.335	0.323294	0.213272	-1.36457	2.011154	Above
Ceetox	st1	Run20081123	A	hillslope	-1.553	0.2507	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st1	Run20081123	A	logic50	-8.743	0.04263	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st1	Run20081123	A	Syx	7.218		4.11267	1.217787		12.36028	
Ceetox	st1	Run20081218	A	top	103.8	4.947	101.5967	0.923307	89.13837	114.0549	
Ceetox	st1	Run20081218	A	bottom	0.2938	2.791	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st1	Run20081218	A	hillslope	-0.9607	0.1524	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st1	Run20081218	A	logic50	-8.78	0.05382	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st1	Run20081218	A	Syx	7.773		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090124 BAD	A	top	92.76	4.038	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090124 BAD	A	bottom	0.6388	1.625	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st2	Run20090124 BAD	A	hillslope	-0.9873	0.1121	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090124 BAD	A	logic50	-9.363	0.03972	-8.852	0.038143	-9.19921	-8.50478	Below
Ceetox	st2	Run20090124 BAD	A	Syx	4.983		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090202 BAD	A	top	90.99	2.99	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090202 BAD	A	bottom	-0.05909	1.629	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st2	Run20090202 BAD	A	hillslope	-0.9601	0.1005	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090202 BAD	A	logic50	-9.167	0.03877	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st2	Run20090202 BAD	A	Syx	4.772		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090213 TEST4	A	top	107.2	2.257	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090213 TEST4	A	bottom	-2.691	1.863	0.323294	0.213272	-1.36457	2.011154	Below
Ceetox	st2	Run20090213 TEST4	A	hillslope	-1.162	0.1536	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090213 TEST4	A	logic50	-8.706	0.05195	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st2	Run20090213 TEST4	A	Syx	6.149		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090213 TEST4_2	A	top	106.6	1.968	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090213 TEST4_2	A	bottom	0.8086	1.633	0.323294	0.213272	-1.36457	2.011154	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st2	Run20090213 TEST4_2	A	hillslope	-1.048	0.1133	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090213 TEST4_2	A	logic50	-8.62	0.0484	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st2	Run20090213 TEST4_2	A	Syx	5.239		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090223	A	top	103.2	3.394	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090223	A	bottom	1.997	2.831	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st2	Run20090223	A	hillslope	-1.122	0.1795	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090223	A	logic50	-8.451	0.05153	-8.852	0.038143	-9.19921	-8.50478	Above
Ceetox	st2	Run20090223	A	Syx	7.854		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090307	A	top	100.6	3.521	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090307	A	bottom	3.225	2.697	0.323294	0.213272	-1.36457	2.011154	Above
Ceetox	st2	Run20090307	A	hillslope	-1.413	0.2436	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090307	A	logic50	-8.738	0.04817	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st2	Run20090307	A	Syx	8.252		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090326	A	top	108.4	2.289	101.5967	0.923307	89.13837	114.0549	
Ceetox	st2	Run20090326	A	bottom	1.837	1.69	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st2	Run20090326	A	hillslope	-1.073	0.09723	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090326	A	logic50	-8.591	0.03036	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st2	Run20090326	A	Syx	4.773		4.11267	1.217787		12.36028	
Ceetox	st3	Run20090418	A	top	103.1	3.567	101.5967	0.923307	89.13837	114.0549	
Ceetox	st3	Run20090418	A	bottom	2.253	2.595	0.323294	0.213272	-1.36457	2.011154	Above
Ceetox	st3	Run20090418	A	hillslope	-1.249	0.1936	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st3	Run20090418	A	logic50	-8.742	0.04698	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st3	Run20090418	A	Syx	7.762		4.11267	1.217787		12.36028	
Ceetox	st3	Run20090426	A	top	113.2	5.313	101.5967	0.923307	89.13837	114.0549	
Ceetox	st3	Run20090426	A	bottom	1.665	3.231	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st3	Run20090426	A	hillslope	-0.9499	0.1565	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st3	Run20090426	A	logic50	-8.778	0.05979	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st3	Run20090426	A	Syx	9.133		4.11267	1.217787		12.36028	
Ceetox	st3	Run20090505	A	top	88.48	2.115	101.5967	0.923307	89.13837	114.0549	Below

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st3	Run20090505	A	bottom	0.5067	1.574	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st3	Run20090505	A	hillslope	-1.21	0.1282	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st3	Run20090505	A	logic50	-8.816	0.03375	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st3	Run20090505	A	Syx	4.633		4.11267	1.217787		12.36028	
Ceetox	st4	Run20090911A	A	top	96.71	2.518	101.5967	0.923307	89.13837	114.0549	
Ceetox	st4	Run20090911A	A	bottom	0.6804	1.546	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st4	Run20090911A	A	hillslope	-1.142	0.1113	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st4	Run20090911A	A	logic50	-9.007	0.03182	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st4	Run20090911A	A	Syx	4.697		4.11267	1.217787		12.36028	
Ceetox	st4	Run20090914A	A	top	94.99	2.73	101.5967	0.923307	89.13837	114.0549	
Ceetox	st4	Run20090914A	A	bottom	2.322	2.07	0.323294	0.213272	-1.36457	2.011154	Above
Ceetox	st4	Run20090914A	A	hillslope	-1.356	0.1862	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st4	Run20090914A	A	logic50	-8.776	0.03951	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st4	Run20090914A	A	Syx	6.278		4.11267	1.217787		12.36028	
Ceetox	st4	Run20090917A	A	top	99.41	3.053	101.5967	0.923307	89.13837	114.0549	
Ceetox	st4	Run20090917A	A	bottom	2.489	2.257	0.323294	0.213272	-1.36457	2.011154	Above
Ceetox	st4	Run20090917A	A	hillslope	-1.263	0.1773	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st4	Run20090917A	A	logic50	-8.746	0.04212	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st4	Run20090917A	A	Syx	6.748		4.11267	1.217787		12.36028	
Dietrich	st1	Assay03	A	top	92.85	4.6	101.5967	0.923307	89.13837	114.0549	
Dietrich	st1	Assay03	A	bottom	1.471	3.322	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st1	Assay03	A	hillslope	-1.278	0.2831	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st1	Assay03	A	logic50	-8.845	0.06681	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st1	Assay03	A	Syx	10.03		4.11267	1.217787		12.36028	
Dietrich	st2	Assay04	A	top	90.39	4.494	101.5967	0.923307	89.13837	114.0549	
Dietrich	st2	Assay04	A	bottom	0.3062	2.669	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st2	Assay04	A	hillslope	-0.9597	0.1629	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st2	Assay04	A	logic50	-9.037	0.06237	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st2	Assay04	A	Syx	7.632		4.11267	1.217787		12.36028	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Dietrich	st2	Assay05	A	top	105.4	2.37	101.5967	0.923307	89.13837	114.0549	
Dietrich	st2	Assay05	A	bottom	-0.4723	1.514	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st2	Assay05	A	hillslope	-0.7922	0.06082	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st2	Assay05	A	logic50	-8.688	0.02875	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st2	Assay05	A	Syx	3.77		4.11267	1.217787		12.36028	
Dietrich	st2	Assay06	A	top	97.81	2.771	101.5967	0.923307	89.13837	114.0549	
Dietrich	st2	Assay06	A	bottom	0.05799	1.709	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st2	Assay06	A	hillslope	-0.9255	0.0911	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st2	Assay06	A	logic50	-8.886	0.03549	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st2	Assay06	A	Syx	4.749		4.11267	1.217787		12.36028	
Dietrich	st2	Assay16	A	top	108.7	2.113	101.5967	0.923307	89.13837	114.0549	
Dietrich	st2	Assay16	A	bottom	0.6574	1.273	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st2	Assay16	A	hillslope	-0.8289	0.0537	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st2	Assay16	A	logic50	-8.75	0.02431	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st2	Assay16	A	Syx	3.343		4.11267	1.217787		12.36028	
Dietrich	st3	Assay08	A	top	101	2.205	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay08	A	bottom	0.6161	1.608	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay08	A	hillslope	-1.112	0.1029	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay08	A	logic50	-8.696	0.02999	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay08	A	Syx	4.62		4.11267	1.217787		12.36028	
Dietrich	st3	Assay09	A	top	83.34	1.575	101.5967	0.923307	89.13837	114.0549	Below
Dietrich	st3	Assay09	A	bottom	0.4314	1.153	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay09	A	hillslope	-1.084	0.08648	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay09	A	logic50	-8.847	0.02804	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay09	A	Syx	3.277		4.11267	1.217787		12.36028	
Dietrich	st3	Assay10_Part 1	A	top	105.9	2.548	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay10_Part 1	A	bottom	-0.4218	1.543	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay10_Part 1	A	hillslope	-0.8278	0.06595	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay10_Part 1	A	logic50	-8.78	0.02968	-8.852	0.038143	-9.19921	-8.50478	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Dietrich	st3	Assay10_ Part 1	A	Syx	4.04		4.11267	1.217787		12.36028	
Dietrich	st3	Assay11	A	top	104.7	2.884	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay11	A	bottom	-0.588	1.709	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay11	A	hillslope	-0.7895	0.06981	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay11	A	logic50	-8.798	0.03328	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay11	A	Syx	4.361		4.11267	1.217787		12.36028	
Dietrich	st3	Assay12_ Part 1	A	top	91.98	6.83	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay12_ Part 1	A	bottom	-3.215	3.629	0.323294	0.213272	-1.36457	2.011154	Below
Dietrich	st3	Assay12_ Part 1	A	hillslope	-0.5951	0.1178	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay12_ Part 1	A	logic50	-8.918	0.07468	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay12_ Part 1	A	Syx	6.683		4.11267	1.217787		12.36028	
Dietrich	st3	Assay13	A	top	93.28	3.23	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay13	A	bottom	-0.3452	1.923	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay13	A	hillslope	-0.8792	0.1056	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay13	A	logic50	-8.774	0.04195	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay13	A	Syx	5.003		4.11267	1.217787		12.36028	
Dietrich	st3	Assay14_ Part 1	A	top	80.31	1.913	101.5967	0.923307	89.13837	114.0549	Below
Dietrich	st3	Assay14_ Part 1	A	bottom	0.1353	1.616	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay14_ Part 1	A	hillslope	-1.154	0.1337	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay14_ Part 1	A	logic50	-8.671	0.03945	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay14_ Part 1	A	Syx	4.516		4.11267	1.217787		12.36028	
Dietrich	st3	Assay15	A	top	121.2	2.661	101.5967	0.923307	89.13837	114.0549	Above
Dietrich	st3	Assay15	A	bottom	0.003364	1.515	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay15	A	hillslope	-0.7385	0.04991	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay15	A	logic50	-8.66	0.02707	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay15	A	Syx	3.717		4.11267	1.217787		12.36028	
Dietrich	st3	Assay16	A	top	108.7	2.113	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay16	A	bottom	0.6574	1.273	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st3	Assay16	A	hillslope	-0.8289	0.0537	-1.01977	0.035952	-1.91309	-0.12645	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Dietrich	st3	Assay16	A	logic50	-8.75	0.02431	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay16	A	Syx	3.343		4.11267	1.217787		12.36028	
Freyberger	st2	A	A	top	97.65	1.125	101.5967	0.923307	89.13837	114.0549	
Freyberger	st2	A	A	bottom	0.2966	0.7445	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	A	A	hillslope	-1.135	0.05156	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	A	A	logic50	-8.888	0.01473	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st2	A	A	Syx	2.212		4.11267	1.217787		12.36028	
Freyberger	st2	B	A	top	96.22	0.9881	101.5967	0.923307	89.13837	114.0549	
Freyberger	st2	B	A	bottom	0.5558	0.6556	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	B	A	hillslope	-1.129	0.04581	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	B	A	logic50	-8.89	0.01323	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st2	B	A	Syx	1.943		4.11267	1.217787		12.36028	
Freyberger	st2	D	A	top	106.4	1.226	101.5967	0.923307	89.13837	114.0549	
Freyberger	st2	D	A	bottom	0.136	0.6625	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	D	A	hillslope	-0.9308	0.03372	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	D	A	logic50	-9.014	0.01314	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st2	D	A	Syx	1.917		4.11267	1.217787		12.36028	
Freyberger	st3	CODE A	A	top	105.8	1.161	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE A	A	bottom	0.9044	0.641	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st3	CODE A	A	hillslope	-0.9552	0.03398	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE A	A	logic50	-8.995	0.01276	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE A	A	Syx	1.866		4.11267	1.217787		12.36028	
Freyberger	st3	CODE A1	A	top	106.7	1.104	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE A1	A	bottom	0.9471	0.5866	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st3	CODE A1	A	hillslope	-0.9387	0.03047	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE A1	A	logic50	-9.035	0.01174	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE A1	A	Syx	1.712		4.11267	1.217787		12.36028	
Freyberger	st3	CODE A2	A	top	103.4	4.058	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE A2	A	bottom	0.3281	2.506	0.323294	0.213272	-1.36457	2.011154	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st3	CODE A2	A	hillslope	-0.9833	0.137	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE A2	A	logic50	-8.865	0.04881	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE A2	A	Syx	7.167		4.11267	1.217787		12.36028	
Freyberger	st3	CODE AB	A	top	100.8	1.239	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE AB	A	bottom	0.3804	0.7198	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st3	CODE AB	A	hillslope	-1.008	0.04224	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE AB	A	logic50	-8.996	0.01464	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE AB	A	Syx	2.117		4.11267	1.217787		12.36028	
Freyberger	st3	CODE B	A	top	97.8	0.8697	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE B	A	bottom	0.574	0.4627	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st3	CODE B	A	hillslope	-0.974	0.02742	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE B	A	logic50	-9.138	0.0101	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE B	A	Syx	1.373		4.11267	1.217787		12.36028	
Freyberger	st3	CODE B1	A	top	107.1	1.608	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE B1	A	bottom	0.145	0.887	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st3	CODE B1	A	hillslope	-0.9175	0.04379	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE B1	A	logic50	-8.967	0.01739	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE B1	A	Syx	2.534		4.11267	1.217787		12.36028	
Freyberger	st3	CODE B2	A	top	98.52	0.8974	101.5967	0.923307	89.13837	114.0549	
Freyberger	st3	CODE B2	A	bottom	0.3027	0.5192	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st3	CODE B2	A	hillslope	-1.009	0.03122	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st3	CODE B2	A	logic50	-9.023	0.01085	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st3	CODE B2	A	Syx	1.529		4.11267	1.217787		12.36028	
JapanCERI	st1	20090113_01	A	top	94.01	1.135	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st1	20090113_01	A	bottom	0.7478	0.7967	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st1	20090113_01	A	hillslope	-1.148	0.05775	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st1	20090113_01	A	logic50	-8.829	0.01621	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st1	20090113_01	A	Syx	2.34		4.11267	1.217787		12.36028	
JapanCERI	st1	20090121_02	A	top	100.8	1.358	101.5967	0.923307	89.13837	114.0549	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st1	20090121_02	A	bottom	0.008107	0.9541	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st1	20090121_02	A	hillslope	-1.112	0.06126	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st1	20090121_02	A	logic50	-8.761	0.01791	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st1	20090121_02	A	Syx	2.769		4.11267	1.217787		12.36028	
JapanCERI	st1	20090128_03	A	top	97.34	0.9505	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st1	20090128_03	A	bottom	0.7555	0.6965	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st1	20090128_03	A	hillslope	-1.163	0.04918	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st1	20090128_03	A	logic50	-8.742	0.01338	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st1	20090128_03	A	Syx	2.032		4.11267	1.217787		12.36028	
JapanCERI	st2	20090422_01	A	top	101.6	1.031	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st2	20090422_01	A	bottom	-0.07589	0.7139	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st2	20090422_01	A	hillslope	-1.002	0.03978	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st2	20090422_01	A	logic50	-8.718	0.0136	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st2	20090422_01	A	Syx	1.994		4.11267	1.217787		12.36028	
JapanCERI	st2	20090427_02	A	top	106.1	1.022	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st2	20090427_02	A	bottom	0.1016	0.684	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st2	20090427_02	A	hillslope	-1.065	0.03979	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st2	20090427_02	A	logic50	-8.771	0.01251	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st2	20090427_02	A	Syx	1.979		4.11267	1.217787		12.36028	
JapanCERI	st2	20090430_03	A	top	100.3	1.595	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st2	20090430_03	A	bottom	-1.151	0.9971	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st2	20090430_03	A	hillslope	-0.881	0.04803	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st2	20090430_03	A	logic50	-8.826	0.01989	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st2	20090430_03	A	Syx	2.687		4.11267	1.217787		12.36028	
JapanCERI	st3	091021_01	A	top	97.93	1.312	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091021_01	A	bottom	0.3775	0.9158	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091021_01	A	hillslope	-1.256	0.07196	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091021_01	A	logic50	-8.856	0.01735	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091021_01	A	Syx	2.773		4.11267	1.217787		12.36028	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	091105_03	A	top	101.1	0.6813	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091105_03	A	bottom	-0.6172	0.4973	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091105_03	A	hillslope	-1.157	0.03309	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091105_03	A	logic50	-8.726	0.009071	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091105_03	A	Syx	1.449		4.11267	1.217787		12.36028	
JapanCERI	st3	091109_04	A	top	100.2	1.357	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091109_04	A	bottom	-0.341	0.9256	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091109_04	A	hillslope	-1.077	0.05745	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091109_04	A	logic50	-8.797	0.01769	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091109_04	A	Syx	2.676		4.11267	1.217787		12.36028	
JapanCERI	st3	091111_06	A	top	97.87	2.08	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091111_06	A	bottom	-0.2817	1.385	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091111_06	A	hillslope	-1.124	0.09362	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091111_06	A	logic50	-8.875	0.02718	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091111_06	A	Syx	4.093		4.11267	1.217787		12.36028	
JapanCERI	st3	091116_08	A	top	98.81	1.913	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091116_08	A	bottom	1.528	1.427	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091116_08	A	hillslope	-1.251	0.1099	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091116_08	A	logic50	-8.738	0.02654	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091116_08	A	Syx	4.243		4.11267	1.217787		12.36028	
JapanCERI	st3	091119_11	A	top	105.5	2.573	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091119_11	A	bottom	-0.9325	1.578	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091119_11	A	hillslope	-0.8745	0.07197	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091119_11	A	logic50	-8.799	0.03015	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091119_11	A	Syx	4.258		4.11267	1.217787		12.36028	
Lovelace	st1	Run13Dec08	A	top	111.6	5.413	101.5967	0.923307	89.13837	114.0549	
Lovelace	st1	Run13Dec08	A	bottom	5.684	3.198	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st1	Run13Dec08	A	hillslope	-1.042	0.1853	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st1	Run13Dec08	A	logic50	-8.86	0.06251	-8.852	0.038143	-9.19921	-8.50478	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st1	Run13Dec08	A	Syx	9.489		4.11267	1.217787		12.36028	
Lovelace	st1	Run19Dec08	A	top	103.2	9.396	101.5967	0.923307	89.13837	114.0549	
Lovelace	st1	Run19Dec08	A	bottom	-2.121	6.917	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st1	Run19Dec08	A	hillslope	-0.7235	0.2376	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st1	Run19Dec08	A	logic50	-8.528	0.1236	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st1	Run19Dec08	A	Syx	14.93		4.11267	1.217787		12.36028	Above
Lovelace	st12	Run06Oct09	A	top	127.7	3.688	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st12	Run06Oct09	A	bottom	2.124	2.529	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st12	Run06Oct09	A	hillslope	-0.9847	0.1117	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run06Oct09	A	logic50	-8.523	0.04317	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st12	Run06Oct09	A	Syx	7.024		4.11267	1.217787		12.36028	
Lovelace	st12	Run09July10 EtOH_Buffer	A	top	95.54	5.819	101.5967	0.923307	89.13837	114.0549	
Lovelace	st12	Run09July10 EtOH_Buffer	A	bottom	-1.635	2.798	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st12	Run09July10 EtOH_Buffer	A	hillslope	-0.6408	0.1016	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run09July10 EtOH_Buffer	A	logic50	-9.109	0.062	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st12	Run09July10 EtOH_Buffer	A	Syx	6.341		4.11267	1.217787		12.36028	
Lovelace	st12	Run19Aug10EtOH_Buffer	A	top	92.31	2.134	101.5967	0.923307	89.13837	114.0549	
Lovelace	st12	Run19Aug10EtOH_Buffer	A	bottom	-0.4664	1.299	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st12	Run19Aug10EtOH_Buffer	A	hillslope	-0.9562	0.07629	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run19Aug10EtOH_Buffer	A	logic50	-8.983	0.02904	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st12	Run19Aug10EtOH_Buffer	A	Syx	3.683		4.11267	1.217787		12.36028	
Lovelace	st2	Run01May09EtOH	A	top	102.8	4.951	101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run01May09EtOH	A	bottom	2.005	1.908	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run01May09EtOH	A	hillslope	-0.8531	0.1078	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run01May09EtOH	A	logic50	-9.44	0.04447	-8.852	0.038143	-9.19921	-8.50478	Below
Lovelace	st2	Run01May09EtOH	A	Syx	5.693		4.11267	1.217787		12.36028	
Lovelace	st2	Run16April09EtOH	A	top	99	7.043	101.5967	0.923307	89.13837	114.0549	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	Run16April09EtOH	A	bottom	1.157	5.648	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run16April09EtOH	A	hillslope	-0.9501	0.3012	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run16April09EtOH	A	logic50	-8.478	0.109	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run16April09EtOH	A	Syx	14.6		4.11267	1.217787		12.36028	Above
Lovelace	st2	Run24Feb09EtOH	A	top	101.5	1.763	101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run24Feb09EtOH	A	bottom	-0.4577	1.182	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run24Feb09EtOH	A	hillslope	-1.052	0.07027	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run24Feb09EtOH	A	logic50	-8.8	0.02247	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st2	Run24Feb09EtOH	A	Syx	3.401		4.11267	1.217787		12.36028	
Lovelace	st3	Run13Mar09EtOH	A	top	106.3	8.05	101.5967	0.923307	89.13837	114.0549	
Lovelace	st3	Run13Mar09EtOH	A	bottom	1.203	6.463	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run13Mar09EtOH	A	hillslope	-1.075	0.375	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run13Mar09EtOH	A	logic50	-8.475	0.1156	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run13Mar09EtOH	A	Syx	17.82		4.11267	1.217787		12.36028	Above
Lovelace	st3	Run19Jun09EtOH	A	top	102.6	4.266	101.5967	0.923307	89.13837	114.0549	
Lovelace	st3	Run19Jun09EtOH	A	bottom	-0.3474	3.443	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run19Jun09EtOH	A	hillslope	-0.9509	0.1746	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run19Jun09EtOH	A	logic50	-8.45	0.06339	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run19Jun09EtOH	A	Syx	8.881		4.11267	1.217787		12.36028	
Lovelace	st3	Run30Jun09EtOH	A	top	104	2.62	101.5967	0.923307	89.13837	114.0549	
Lovelace	st3	Run30Jun09EtOH	A	bottom	0.3315	1.736	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run30Jun09EtOH	A	hillslope	-0.8775	0.08063	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run30Jun09EtOH	A	logic50	-8.688	0.03335	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st3	Run30Jun09EtOH	A	Syx	4.579		4.11267	1.217787		12.36028	
Missouri	st1	Run7003	A	top	111.3	1.031	101.5967	0.923307	89.13837	114.0549	
Missouri	st1	Run7003	A	bottom	0.5582	1.031	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run7003	A	hillslope	-1.087	0.08203	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run7003	A	logic50	-8.919	0.02462	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st1	Run7003	A	Syx	3.053		4.11267	1.217787		12.36028	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st1	Run7004	A	top	112.9	1.801	101.5967	0.923307	89.13837	114.0549	
Missouri	st1	Run7004	A	bottom	-0.09245	1.843	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run7004	A	hillslope	-0.919	0.09948	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run7004	A	logic50	-8.869	0.04582	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st1	Run7004	A	Syx	5.144		4.11267	1.217787		12.36028	
Missouri	st1	Run7005	A	top	105.7	2.232	101.5967	0.923307	89.13837	114.0549	
Missouri	st1	Run7005	A	bottom	-0.3871	2.299	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run7005	A	hillslope	-0.8772	0.1205	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run7005	A	logic50	-8.921	0.06016	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st1	Run7005	A	Syx	6.29		4.11267	1.217787		12.36028	
Missouri	st1	Run7006	A	top	107.4	2.983	101.5967	0.923307	89.13837	114.0549	
Missouri	st1	Run7006	A	bottom	-0.5713	1.834	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run7006	A	hillslope	-0.9939	0.09709	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run7006	A	logic50	-8.855	0.03414	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st1	Run7006	A	Syx	5.277		4.11267	1.217787		12.36028	
Missouri	st1	Run7007	A	top	109.2	2.03	101.5967	0.923307	89.13837	114.0549	
Missouri	st1	Run7007	A	bottom	0.1206	1.163	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run7007	A	hillslope	-0.9645	0.0595	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run7007	A	logic50	-8.924	0.02204	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st1	Run7007	A	Syx	3.368		4.11267	1.217787		12.36028	
Missouri	st2	Run9003	A	top	106.3	3.727	101.5967	0.923307	89.13837	114.0549	
Missouri	st2	Run9003	A	bottom	-1.342	1.877	0.323294	0.213272	-1.36457	2.011154	
Missouri	st2	Run9003	A	hillslope	-0.891	0.09124	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st2	Run9003	A	logic50	-9.107	0.03764	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st2	Run9003	A	Syx	5.412		4.11267	1.217787		12.36028	
Missouri	st2	Run9004	A	top	107.5	3.059	101.5967	0.923307	89.13837	114.0549	
Missouri	st2	Run9004	A	bottom	-0.8108	1.482	0.323294	0.213272	-1.36457	2.011154	
Missouri	st2	Run9004	A	hillslope	-0.8654	0.07	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st2	Run9004	A	logic50	-9.128	0.0299	-8.852	0.038143	-9.19921	-8.50478	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st2	Run9004	A	Syx	4.249		4.11267	1.217787		12.36028	
Missouri	st2	Run9005	A	top	105.6	4.1	101.5967	0.923307	89.13837	114.0549	
Missouri	st2	Run9005	A	bottom	-2.119	2.058	0.323294	0.213272	-1.36457	2.011154	Below
Missouri	st2	Run9005	A	hillslope	-0.9062	0.1023	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st2	Run9005	A	logic50	-9.137	0.0413	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st2	Run9005	A	Syx	5.993		4.11267	1.217787		12.36028	
Missouri	st2	Run9007	A	top	102.9	3.221	101.5967	0.923307	89.13837	114.0549	
Missouri	st2	Run9007	A	bottom	-0.6171	1.607	0.323294	0.213272	-1.36457	2.011154	
Missouri	st2	Run9007	A	hillslope	-0.9845	0.09285	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st2	Run9007	A	logic50	-9.21	0.03338	-8.852	0.038143	-9.19921	-8.50478	Below
Missouri	st2	Run9007	A	Syx	4.874		4.11267	1.217787		12.36028	
Missouri	st3	Run8003	A	top	103.2	1.628	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8003	A	bottom	0.334	0.9027	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8003	A	hillslope	-0.9806	0.05041	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8003	A	logic50	-9.031	0.01823	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8003	A	Syx	2.656		4.11267	1.217787		12.36028	
Missouri	st3	Run8004	A	top	114.5	3.418	101.5967	0.923307	89.13837	114.0549	Above
Missouri	st3	Run8004	A	bottom	1.232	1.875	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8004	A	hillslope	-0.9346	0.08962	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8004	A	logic50	-8.92	0.03523	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8004	A	Syx	5.414		4.11267	1.217787		12.36028	
Missouri	st3	Run8005	A	top	96.83	1.166	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8005	A	bottom	-0.449	0.5959	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8005	A	hillslope	-0.8539	0.03022	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8005	A	logic50	-9.14	0.01337	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8005	A	Syx	1.673		4.11267	1.217787		12.36028	
Missouri	st3	Run8101	A	top	96.73	1.001	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8101	A	bottom	0.29	0.3484	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8101	A	hillslope	-1.495	0.06063	-1.01977	0.035952	-1.91309	-0.12645	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st3	Run8101	A	logic50	-8.989	0.009115	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8101	A	Syx	1.344		4.11267	1.217787		12.36028	
Missouri	st3	Run8102	A	top	91.49	0.7296	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8102	A	bottom	0.7358	0.2371	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8102	A	hillslope	-1.351	0.03852	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8102	A	logic50	-9.02	0.007407	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8102	A	Syx	0.8891		4.11267	1.217787		12.36028	
Missouri	st3	Run8107	A	top	96.77	1.8	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8107	A	bottom	0.5864	1.088	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8107	A	hillslope	-1.074	0.07202	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8107	A	logic50	-9.002	0.02272	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8107	A	Syx	3.246		4.11267	1.217787		12.36028	
Missouri	st3	Run8108	A	top	109.9	2.62	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8108	A	bottom	-1.148	1.652	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8108	A	hillslope	-1.002	0.08226	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8108	A	logic50	-8.898	0.02851	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8108	A	Syx	4.534		4.11267	1.217787		12.36028	
Missouri	st4	Run1101	A	top	94.15	2.667	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1101	A	bottom	2.138	1.719	0.323294	0.213272	-1.36457	2.011154	Above
Missouri	st4	Run1101	A	hillslope	-1.014	0.1087	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1101	A	logic50	-8.883	0.03715	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1101	A	Syx	4.925		4.11267	1.217787		12.36028	
Missouri	st4	Run1102	A	top	86.2	2.708	101.5967	0.923307	89.13837	114.0549	Below
Missouri	st4	Run1102	A	bottom	-0.3514	1.743	0.323294	0.213272	-1.36457	2.011154	
Missouri	st4	Run1102	A	hillslope	-1.031	0.1197	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1102	A	logic50	-9	0.04209	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1102	A	Syx	5.028		4.11267	1.217787		12.36028	
Missouri	st4	Run1103	A	top	90.45	2.338	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1103	A	bottom	-0.4776	1.529	0.323294	0.213272	-1.36457	2.011154	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	Run1103	A	hillslope	-0.9386	0.08835	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1103	A	logic50	-8.886	0.03433	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1103	A	Syx	4.206		4.11267	1.217787		12.36028	
Missouri	st4	Run1104	A	top	110.4	2.874	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1104	A	bottom	-1.05	1.68	0.323294	0.213272	-1.36457	2.011154	
Missouri	st4	Run1104	A	hillslope	-0.8881	0.07533	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1104	A	logic50	-8.841	0.03122	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1104	A	Syx	4.641		4.11267	1.217787		12.36028	
Missouri	st4	Run1106	A	top	106.8	2.17	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1106	A	bottom	0.7801	1.357	0.323294	0.213272	-1.36457	2.011154	
Missouri	st4	Run1106	A	hillslope	-1.18	0.0923	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1106	A	logic50	-8.922	0.02482	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1106	A	Syx	4.149		4.11267	1.217787		12.36028	
Missouri	st4	Run1107	A	top	104.9	2.419	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1107	A	bottom	-1.411	1.373	0.323294	0.213272	-1.36457	2.011154	Below
Missouri	st4	Run1107	A	hillslope	-1.037	0.07951	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1107	A	logic50	-9.03	0.02645	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1107	A	Syx	4.112		4.11267	1.217787		12.36028	
Missouri	st4	Run1108	A	top	108.9	1.713	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1108	A	bottom	-0.5873	1.06	0.323294	0.213272	-1.36457	2.011154	
Missouri	st4	Run1108	A	hillslope	-1.086	0.06223	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1108	A	logic50	-8.888	0.01916	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1108	A	Syx	3.155		4.11267	1.217787		12.36028	
Missouri	st4	Run1109	A	top	106.4	2.261	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1109	A	bottom	-2.22	1.335	0.323294	0.213272	-1.36457	2.011154	Below
Missouri	st4	Run1109	A	hillslope	-1.041	0.07532	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1109	A	logic50	-8.967	0.02483	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1109	A	Syx	3.959		4.11267	1.217787		12.36028	
Missouri	st4	Run1111	A	top	107.4	4.256	101.5967	0.923307	89.13837	114.0549	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	Run1111	A	bottom	2.339	2.494	0.323294	0.213272	-1.36457	2.011154	Above
Missouri	st4	Run1111	A	hillslope	-1.079	0.153	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1111	A	logic50	-8.954	0.04797	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1111	A	Syx	7.516		4.11267	1.217787		12.36028	
Ceetox	st3	Run20090418 DMS	DMSO(A)	top	108.3	4.023	101.5967	0.923307	89.13837	114.0549	
Ceetox	st3	Run20090418 DMS	DMSO(A)	bottom	-0.7077	2.365	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st3	Run20090418 DMS	DMSO(A)	hillslope	-0.836	0.1004	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st3	Run20090418 DMS	DMSO(A)	logic50	-8.809	0.04487	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st3	Run20090418 DMS	DMSO(A)	Syx	6.293		4.11267	1.217787		12.36028	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	top	91.64	3.556	101.5967	0.923307	89.13837	114.0549	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	bottom	1.749	2.507	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	hillslope	-1.063	0.1699	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	logic50	-8.797	0.05392	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	Syx	7.142		4.11267	1.217787		12.36028	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	top	86.7	2.75	101.5967	0.923307	89.13837	114.0549	Below
Ceetox	st3	Run20090514 DMSO	DMSO(A)	bottom	2.71	1.936	0.323294	0.213272	-1.36457	2.011154	Above
Ceetox	st3	Run20090514 DMSO	DMSO(A)	hillslope	-1.352	0.1964	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	logic50	-8.951	0.0432	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	Syx	5.982		4.11267	1.217787		12.36028	
Freyberger	st2	E	DMSO(A)	top	114.4	1.415	101.5967	0.923307	89.13837	114.0549	Above
Freyberger	st2	E	DMSO(A)	bottom	-0.5082	0.7205	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	E	DMSO(A)	hillslope	-0.8638	0.03143	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	E	DMSO(A)	logic50	-8.993	0.01362	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st2	E	DMSO(A)	Syx	2.038		4.11267	1.217787		12.36028	
Freyberger	st2	F	DMSO(A)	top	106.5	1.431	101.5967	0.923307	89.13837	114.0549	
Freyberger	st2	F	DMSO(A)	bottom	0.1982	0.7319	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	F	DMSO(A)	hillslope	-0.9095	0.03678	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	F	DMSO(A)	logic50	-9.082	0.01478	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st2	F	DMSO(A)	Syx	2.125		4.11267	1.217787		12.36028	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st2	G	DMSO(A)	top	93.13	1.801	101.5967	0.923307	89.13837	114.0549	
Freyberger	st2	G	DMSO(A)	bottom	-0.2039	1.001	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	G	DMSO(A)	hillslope	-0.9475	0.05889	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	G	DMSO(A)	logic50	-9.108	0.02289	-8.852	0.038143	-9.19921	-8.50478	
Freyberger	st2	G	DMSO(A)	Syx	2.898		4.11267	1.217787		12.36028	
JapanCERI	st3	091110_05	DMSO(A)	top	103.9	2.664	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091110_05	DMSO(A)	bottom	-0.113	1.733	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091110_05	DMSO(A)	hillslope	-1.077	0.1048	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091110_05	DMSO(A)	logic50	-8.839	0.03243	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091110_05	DMSO(A)	Syx	5.074		4.11267	1.217787		12.36028	
JapanCERI	st3	091112_07	DMSO(A)	top	103.1	1.315	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091112_07	DMSO(A)	bottom	-1.332	0.8658	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091112_07	DMSO(A)	hillslope	-0.9622	0.04493	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091112_07	DMSO(A)	logic50	-8.772	0.01638	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091112_07	DMSO(A)	Syx	2.407		4.11267	1.217787		12.36028	
JapanCERI	st3	091117_09	DMSO(A)	top	102.5	1.012	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091117_09	DMSO(A)	bottom	0.7646	0.6773	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091117_09	DMSO(A)	hillslope	-1.142	0.04509	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091117_09	DMSO(A)	logic50	-8.833	0.01269	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091117_09	DMSO(A)	Syx	2.01		4.11267	1.217787		12.36028	
JapanCERI	st3	091118_10	DMSO(A)	top	102.2	1.619	101.5967	0.923307	89.13837	114.0549	
JapanCERI	st3	091118_10	DMSO(A)	bottom	0.7677	1.086	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091118_10	DMSO(A)	hillslope	-1.034	0.06343	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091118_10	DMSO(A)	logic50	-8.774	0.0208	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091118_10	DMSO(A)	Syx	3.102		4.11267	1.217787		12.36028	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	top	103.9	1.295	101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	bottom	0.7821	0.7678	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	hillslope	-1.005	0.0435	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	logic50	-8.933	0.0151	-8.852	0.038143	-9.19921	-8.50478	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	Syx	2.242		4.11267	1.217787		12.36028	
Missouri	st3	Run8201 DMSO	DMSO(A)	top	86.65	1.099	101.5967	0.923307	89.13837	114.0549	Below
Missouri	st3	Run8201 DMSO	DMSO(A)	bottom	0.131	0.6721	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8201 DMSO	DMSO(A)	hillslope	-1.02	0.04601	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8201 DMSO	DMSO(A)	logic50	-9.064	0.01647	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8201 DMSO	DMSO(A)	Syx	1.958		4.11267	1.217787		12.36028	
Missouri	st3	Run8203 DMSO	DMSO(A)	top	94.21	3.361	101.5967	0.923307	89.13837	114.0549	
Missouri	st3	Run8203 DMSO	DMSO(A)	bottom	0.173	1.853	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8203 DMSO	DMSO(A)	hillslope	-1.031	0.1211	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8203 DMSO	DMSO(A)	logic50	-9.15	0.0415	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8203 DMSO	DMSO(A)	Syx	5.579		4.11267	1.217787		12.36028	
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	top	131.3	5.861	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	bottom	2.512	3.949	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	hillslope	-1.321	0.2563	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	logic50	-8.744	0.06142	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	Syx	12.26		4.11267	1.217787		12.36028	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	top	131.2	3.747	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	bottom	1.195	2.311	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	hillslope	-1.162	0.1258	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	logic50	-8.798	0.03726	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	Syx	7.054		4.11267	1.217787		12.36028	
Lovelace	st2	Run30Jan09DMSO	DMSO(U)	top			101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run30Jan09DMSO	DMSO(U)	bottom	4.14E-15	71.43	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run30Jan09DMSO	DMSO(U)	hillslope	-50.87	1.18E+2 8	-1.01977	0.035952	-1.91309	-0.12645	Below
Lovelace	st2	Run30Jan09DMSO	DMSO(U)	logic50	-6.546	1.27E+2 6	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run30Jan09DMSO	DMSO(U)	Syx	175		4.11267	1.217787		12.36028	Above
Lovelace	st3	Run03May09DMSO	DMSO(U)	top	169.7	5.572	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run03May09DMSO	DMSO(U)	bottom	-0.6274	2.993	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run03May09DMSO	DMSO(U)	hillslope	-0.6822	0.06453	-1.01977	0.035952	-1.91309	-0.12645	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	Run03May09DMSO	DMSO(U)	logic50	-8.365	0.04838	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run03May09DMSO	DMSO(U)	Syx	6.968		4.11267	1.217787		12.36028	
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	top	144.4	8.991	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	bottom	1.439	5.291	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	hillslope	-0.7424	0.1474	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	logic50	-8.437	0.09128	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	Syx	12.88		4.11267	1.217787		12.36028	Above
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	top	118	11.44	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	bottom	-5.4	6.483	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	hillslope	-0.7491	0.2139	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	logic50	-8.762	0.11	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	Syx	16.13		4.11267	1.217787		12.36028	Above
Missouri	st3	Run8202 DMSO	DMSO(U)	top	83.25	0.8545	101.5967	0.923307	89.13837	114.0549	Below
Missouri	st3	Run8202 DMSO	DMSO(U)	bottom	0.3768	0.523	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8202 DMSO	DMSO(U)	hillslope	-1.135	0.04325	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8202 DMSO	DMSO(U)	logic50	-9.142	0.0135	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8202 DMSO	DMSO(U)	Syx	1.587		4.11267	1.217787		12.36028	
Ceetox	st1	Run20081124	U	top	81.73	3.724	101.5967	0.923307	89.13837	114.0549	Below
Ceetox	st1	Run20081124	U	bottom	-0.0878	2.618	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st1	Run20081124	U	hillslope	-1.064	0.1954	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st1	Run20081124	U	logic50	-8.928	0.06703	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st1	Run20081124	U	Syx	7.469		4.11267	1.217787		12.36028	
Ceetox	st2	Run20090128 BAD	U	top	79.71	1.82	101.5967	0.923307	89.13837	114.0549	Below
Ceetox	st2	Run20090128 BAD	U	bottom	0.8702	1.251	0.323294	0.213272	-1.36457	2.011154	
Ceetox	st2	Run20090128 BAD	U	hillslope	-1.167	0.1101	-1.01977	0.035952	-1.91309	-0.12645	
Ceetox	st2	Run20090128 BAD	U	logic50	-9.016	0.03349	-8.852	0.038143	-9.19921	-8.50478	
Ceetox	st2	Run20090128 BAD	U	Syx	3.715		4.11267	1.217787		12.36028	
Dietrich	st1	Assay01	U	top			101.5967	0.923307	89.13837	114.0549	
Dietrich	st1	Assay01	U	bottom	0.1828	2.547	0.323294	0.213272	-1.36457	2.011154	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Dietrich	st1	Assay01	U	hillslope	-0.652	0.0949	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st1	Assay01	U	logic50	-10.4	0.07984	-8.852	0.038143	-9.19921	-8.50478	Below
Dietrich	st1	Assay01	U	Syx	9.093		4.11267	1.217787		12.36028	
Dietrich	st1	Assay02	U	top	130.5	4.936	101.5967	0.923307	89.13837	114.0549	Above
Dietrich	st1	Assay02	U	bottom	-0.1917	2.483	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st1	Assay02	U	hillslope	-0.7012	0.07388	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st1	Assay02	U	logic50	-8.715	0.04353	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st1	Assay02	U	Syx	6.07		4.11267	1.217787		12.36028	
Dietrich	st2	Assay15	U	top	121.2	2.661	101.5967	0.923307	89.13837	114.0549	Above
Dietrich	st2	Assay15	U	bottom	0.003364	1.515	0.323294	0.213272	-1.36457	2.011154	
Dietrich	st2	Assay15	U	hillslope	-0.7385	0.04991	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st2	Assay15	U	logic50	-8.66	0.02707	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st2	Assay15	U	Syx	3.717		4.11267	1.217787		12.36028	
Dietrich	st3	Assay07	U	top	101.8	8.856	101.5967	0.923307	89.13837	114.0549	
Dietrich	st3	Assay07	U	bottom	-4.885	5.046	0.323294	0.213272	-1.36457	2.011154	Below
Dietrich	st3	Assay07	U	hillslope	-0.5597	0.1294	-1.01977	0.035952	-1.91309	-0.12645	
Dietrich	st3	Assay07	U	logic50	-8.857	0.08584	-8.852	0.038143	-9.19921	-8.50478	
Dietrich	st3	Assay07	U	Syx	8.958		4.11267	1.217787		12.36028	
Freyberger	st2	C	U	top	92.12	2.428	101.5967	0.923307	89.13837	114.0549	
Freyberger	st2	C	U	bottom	1.061	0.4877	0.323294	0.213272	-1.36457	2.011154	
Freyberger	st2	C	U	hillslope	-0.9903	0.0611	-1.01977	0.035952	-1.91309	-0.12645	
Freyberger	st2	C	U	logic50	-10.12	0.02022	-8.852	0.038143	-9.19921	-8.50478	Below
Freyberger	st2	C	U	Syx	1.657		4.11267	1.217787		12.36028	
JapanCERI	st3	091026_02	U	top	84.29	2.731	101.5967	0.923307	89.13837	114.0549	Below
JapanCERI	st3	091026_02	U	bottom	0.6386	2.313	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091026_02	U	hillslope	-1.51	0.2621	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091026_02	U	logic50	-8.725	0.04831	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091026_02	U	Syx	6.992		4.11267	1.217787		12.36028	
JapanCERI	st3	091104_00	U	top	82.02	7.446	101.5967	0.923307	89.13837	114.0549	Below

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	091104_00	U	bottom	1.031	6.869	0.323294	0.213272	-1.36457	2.011154	
JapanCERI	st3	091104_00	U	hillslope	-1.629	0.8875	-1.01977	0.035952	-1.91309	-0.12645	
JapanCERI	st3	091104_00	U	logic50	-8.618	0.1415	-8.852	0.038143	-9.19921	-8.50478	
JapanCERI	st3	091104_00	U	Syx	20.56		4.11267	1.217787		12.36028	Above
Lovelace	st1	Run03Dec08	U	top	169.6	11.55	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st1	Run03Dec08	U	bottom	4.669	5.967	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st1	Run03Dec08	U	hillslope	-0.7843	0.1552	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st1	Run03Dec08	U	logic50	-8.582	0.0988	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st1	Run03Dec08	U	Syx	15.11		4.11267	1.217787		12.36028	Above
Lovelace	st1	Run09Dec08	U	top	178.3	17.37	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st1	Run09Dec08	U	bottom	0.7443	8.675	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st1	Run09Dec08	U	hillslope	-0.935	0.2729	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st1	Run09Dec08	U	logic50	-8.751	0.1358	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st1	Run09Dec08	U	Syx	25.69		4.11267	1.217787		12.36028	Above
Lovelace	st1	Run16Dec08	U	top	106.1	4.868	101.5967	0.923307	89.13837	114.0549	
Lovelace	st1	Run16Dec08	U	bottom	14.21	3.067	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st1	Run16Dec08	U	hillslope	-4.507	2.46	-1.01977	0.035952	-1.91309	-0.12645	Below
Lovelace	st1	Run16Dec08	U	logic50	-9.152	0.09378	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st1	Run16Dec08	U	Syx	11.84		4.11267	1.217787		12.36028	
Lovelace	st1	Run27Jan09	U	top	132.6	11.59	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st1	Run27Jan09	U	bottom	2.33	5.713	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st1	Run27Jan09	U	hillslope	-0.8257	0.2101	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st1	Run27Jan09	U	logic50	-8.844	0.1039	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st1	Run27Jan09	U	Syx	15.87		4.11267	1.217787		12.36028	Above
Lovelace	st12	Run09July10	U	top	175.9	10.85	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st12	Run09July10	U	bottom	-2.924	5.125	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st12	Run09July10	U	hillslope	-0.6323	0.1001	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run09July10	U	logic50	-8.444	0.07937	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st12	Run09July10	U	Syx	11.51		4.11267	1.217787		12.36028	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st12	Run09Oct09 EtOH	U	top	72.75	7.216	101.5967	0.923307	89.13837	114.0549	Below
Lovelace	st12	Run09Oct09 EtOH	U	bottom	-2.03	5	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st12	Run09Oct09 EtOH	U	hillslope	-0.6768	0.2237	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run09Oct09 EtOH	U	logic50	-9.138	0.157	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st12	Run09Oct09 EtOH	U	Syx	10.35		4.11267	1.217787		12.36028	
Lovelace	st12	Run14Oct09 EtOH	U	top	119.4	5.277	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st12	Run14Oct09 EtOH	U	bottom	-2.75	2.82	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st12	Run14Oct09 EtOH	U	hillslope	-0.5851	0.06915	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run14Oct09 EtOH	U	logic50	-8.678	0.04581	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st12	Run14Oct09 EtOH	U	Syx	5.486		4.11267	1.217787		12.36028	
Lovelace	st12	Run19Aug10EtOH	U	top	746.9	16.82	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st12	Run19Aug10EtOH	U	bottom	-4.961	10.19	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st12	Run19Aug10EtOH	U	hillslope	-0.9486	0.07313	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run19Aug10EtOH	U	logic50	-7.744	0.08262	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st12	Run19Aug10EtOH	U	Syx	28.81		4.11267	1.217787		12.36028	Above
Lovelace	st12	Run25Sep09 EtOH	U	top	106.6	6.383	101.5967	0.923307	89.13837	114.0549	
Lovelace	st12	Run25Sep09 EtOH	U	bottom	-3.189	3.754	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st12	Run25Sep09 EtOH	U	hillslope	-0.5516	0.09041	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st12	Run25Sep09 EtOH	U	logic50	-8.733	0.06057	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st12	Run25Sep09 EtOH	U	Syx	6.424		4.11267	1.217787		12.36028	
Lovelace	st2	Run06Feb09EtOH	U	top	114.2	12.21	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run06Feb09EtOH	U	bottom	-0.5208	11.24	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run06Feb09EtOH	U	hillslope	-0.6448	0.2516	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run06Feb09EtOH	U	logic50	-8.18	0.1538	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run06Feb09EtOH	U	Syx	16.23		4.11267	1.217787		12.36028	Above
Lovelace	st2	Run09Feb09EtOH	U	top	92.62	4.452	101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run09Feb09EtOH	U	bottom	-3.833	4.379	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st2	Run09Feb09EtOH	U	hillslope	-0.725	0.1484	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run09Feb09EtOH	U	logic50	-8.375	0.07597	-8.852	0.038143	-9.19921	-8.50478	Above

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	Run09Feb09EtOH	U	Syx	8.095		4.11267	1.217787		12.36028	
Lovelace	st2	Run10April09EtOH	U	top	1105	32.18	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run10April09EtOH	U	bottom	12.44	33.51	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st2	Run10April09EtOH	U	hillslope	-1.564	0.3059	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run10April09EtOH	U	logic50	-7.252	0.2558	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run10April09EtOH	U	Syx	96.35		4.11267	1.217787		12.36028	Above
Lovelace	st2	Run12Feb09EtOH	U	top			101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run12Feb09EtOH	U	bottom	-1.248	5.187	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run12Feb09EtOH	U	hillslope	-0.7467	0.4201	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run12Feb09EtOH	U	logic50			-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st2	Run12Feb09EtOH	U	Syx	10.33		4.11267	1.217787		12.36028	
Lovelace	st2	Run13May09EtOH	U	top	128.4	3.244	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run13May09EtOH	U	bottom	-0.7256	2.75	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run13May09EtOH	U	hillslope	-0.7585	0.07929	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run13May09EtOH	U	logic50	-8.133	0.04611	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run13May09EtOH	U	Syx	5.788		4.11267	1.217787		12.36028	
Lovelace	st2	Run21April09EtOH	U	top	121.7	3.268	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run21April09EtOH	U	bottom			0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run21April09EtOH	U	hillslope			-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run21April09EtOH	U	logic50			-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st2	Run21April09EtOH	U	Syx	12.65		4.11267	1.217787		12.36028	Above
Lovelace	st2	Run24April09EtOH	U	top	133	5.726	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st2	Run24April09EtOH	U	bottom	-0.1557	4.625	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run24April09EtOH	U	hillslope	-0.8059	0.1438	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run24April09EtOH	U	logic50	-8.166	0.07854	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run24April09EtOH	U	Syx	10.55		4.11267	1.217787		12.36028	
Lovelace	st2	Run28April09EtOH	U	top	90.47	5.957	101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run28April09EtOH	U	bottom	1.023	6.232	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st2	Run28April09EtOH	U	hillslope	-1.063	0.4227	-1.01977	0.035952	-1.91309	-0.12645	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	Run28April09EtOH	U	logic50	-8.198	0.124	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st2	Run28April09EtOH	U	Syx	15.21		4.11267	1.217787		12.36028	Above
Lovelace	st2	Run28May09EtOH	U	top	105.4	5.258	101.5967	0.923307	89.13837	114.0549	
Lovelace	st2	Run28May09EtOH	U	bottom	-2.838	3.655	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st2	Run28May09EtOH	U	hillslope	-0.625	0.1002	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st2	Run28May09EtOH	U	logic50	-8.572	0.06106	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st2	Run28May09EtOH	U	Syx	6.869		4.11267	1.217787		12.36028	
Lovelace	st3	Run10Mar09EtOH	U	top	143.7	62.64	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run10Mar09EtOH	U	bottom	-24.32	44.47	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st3	Run10Mar09EtOH	U	hillslope	-0.3026	0.256	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run10Mar09EtOH	U	logic50	-8.408	0.2119	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run10Mar09EtOH	U	Syx	19.34		4.11267	1.217787		12.36028	Above
Lovelace	st3	Run17Jun09EtOH	U	top	152.8	3.157	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run17Jun09EtOH	U	bottom	-2.862	2.287	0.323294	0.213272	-1.36457	2.011154	Below
Lovelace	st3	Run17Jun09EtOH	U	hillslope	-0.8407	0.06598	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run17Jun09EtOH	U	logic50	-8.242	0.03578	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run17Jun09EtOH	U	Syx	5.668		4.11267	1.217787		12.36028	
Lovelace	st3	Run20Mar09EtOH	U	top	122	41.9	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run20Mar09EtOH	U	bottom	10.87	32.46	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st3	Run20Mar09EtOH	U	hillslope			-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run20Mar09EtOH	U	logic50			-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st3	Run20Mar09EtOH	U	Syx	125.7		4.11267	1.217787		12.36028	Above
Lovelace	st3	Run23Jun09EtOH	U	top	129.6	6.064	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run23Jun09EtOH	U	bottom	0.03984	4.387	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run23Jun09EtOH	U	hillslope	-0.8993	0.1663	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run23Jun09EtOH	U	logic50	-8.386	0.0739	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run23Jun09EtOH	U	Syx	11.39		4.11267	1.217787		12.36028	
Lovelace	st3	Run24Mar09EtOH	U	top	71.12	7.391	101.5967	0.923307	89.13837	114.0549	Below
Lovelace	st3	Run24Mar09EtOH	U	bottom	2.952	6.472	0.323294	0.213272	-1.36457	2.011154	Above

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	Run24Mar09EtOH	U	hillslope	-2.158	1.523	-1.01977	0.035952	-1.91309	-0.12645	Below
Lovelace	st3	Run24Mar09EtOH	U	logic50	-8.799	0.182	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st3	Run24Mar09EtOH	U	Syx	20.89		4.11267	1.217787		12.36028	Above
Lovelace	st3	Run25Jun09EtOH	U	top	142.5	2.415	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run25Jun09EtOH	U	bottom	-0.995	1.659	0.323294	0.213272	-1.36457	2.011154	
Lovelace	st3	Run25Jun09EtOH	U	hillslope	-0.8262	0.05119	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run25Jun09EtOH	U	logic50	-8.34	0.02718	-8.852	0.038143	-9.19921	-8.50478	Above
Lovelace	st3	Run25Jun09EtOH	U	Syx	4.146		4.11267	1.217787		12.36028	
Lovelace	st3	Run31Mar09EtOH	U	top	300.6	21.26	101.5967	0.923307	89.13837	114.0549	Above
Lovelace	st3	Run31Mar09EtOH	U	bottom	2.723	12.49	0.323294	0.213272	-1.36457	2.011154	Above
Lovelace	st3	Run31Mar09EtOH	U	hillslope	-1.337	0.3668	-1.01977	0.035952	-1.91309	-0.12645	
Lovelace	st3	Run31Mar09EtOH	U	logic50	-8.576	0.1412	-8.852	0.038143	-9.19921	-8.50478	
Lovelace	st3	Run31Mar09EtOH	U	Syx	40.46		4.11267	1.217787		12.36028	Above
Missouri	st1	Run3005	U	top	137.4	12.61	101.5967	0.923307	89.13837	114.0549	Above
Missouri	st1	Run3005	U	bottom	1.004	2.589	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run3005	U	hillslope	-0.624	0.09777	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run3005	U	logic50	-9.414	0.051	-8.852	0.038143	-9.19921	-8.50478	Below
Missouri	st1	Run3005	U	Syx	6.671		4.11267	1.217787		12.36028	
Missouri	st1	Run3006	U	top	155.3	47.38	101.5967	0.923307	89.13837	114.0549	Above
Missouri	st1	Run3006	U	bottom	-5.691	5.09	0.323294	0.213272	-1.36457	2.011154	Below
Missouri	st1	Run3006	U	hillslope	-0.3619	0.1019	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run3006	U	logic50	-9.521	0.07213	-8.852	0.038143	-9.19921	-8.50478	Below
Missouri	st1	Run3006	U	Syx	6.312		4.11267	1.217787		12.36028	
Missouri	st1	Run3008	U	top	123.8	8.996	101.5967	0.923307	89.13837	114.0549	Above
Missouri	st1	Run3008	U	bottom	-1.216	1.929	0.323294	0.213272	-1.36457	2.011154	
Missouri	st1	Run3008	U	hillslope	-0.5722	0.06857	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st1	Run3008	U	logic50	-9.466	0.04016	-8.852	0.038143	-9.19921	-8.50478	Below
Missouri	st1	Run3008	U	Syx	4.548		4.11267	1.217787		12.36028	
Missouri	st3	Run8001	U	top	88.12	2.247	101.5967	0.923307	89.13837	114.0549	Below

Laboratory	Sub Task	Test ID	Acceptability FWA, E2	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st3	Run8001	U	bottom	0.1329	1.289	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8001	U	hillslope	-0.9064	0.07545	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8001	U	logic50	-9.092	0.03185	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8001	U	Syx	3.619		4.11267	1.217787		12.36028	
Missouri	st3	Run8002	U	top	81.14	1.126	101.5967	0.923307	89.13837	114.0549	Below
Missouri	st3	Run8002	U	bottom	-0.3397	0.6777	0.323294	0.213272	-1.36457	2.011154	
Missouri	st3	Run8002	U	hillslope	-0.922	0.04334	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st3	Run8002	U	logic50	-9.126	0.01895	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st3	Run8002	U	Syx	1.893		4.11267	1.217787		12.36028	
Missouri	st4	Run1105	U	top	107.6	2.222	101.5967	0.923307	89.13837	114.0549	
Missouri	st4	Run1105	U	bottom	-0.1178	1.353	0.323294	0.213272	-1.36457	2.011154	
Missouri	st4	Run1105	U	hillslope	-0.8648	0.06026	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1105	U	logic50	-8.777	0.02571	-8.852	0.038143	-9.19921	-8.50478	
Missouri	st4	Run1105	U	Syx	3.636		4.11267	1.217787		12.36028	
Missouri	st4	Run1110	U	top	85.17	3.842	101.5967	0.923307	89.13837	114.0549	Below
Missouri	st4	Run1110	U	bottom	2.82	2.075	0.323294	0.213272	-1.36457	2.011154	Above
Missouri	st4	Run1110	U	hillslope	-1.666	0.3044	-1.01977	0.035952	-1.91309	-0.12645	
Missouri	st4	Run1110	U	logic50	-9.409	0.0495	-8.852	0.038143	-9.19921	-8.50478	Below
Missouri	st4	Run1110	U	Syx	7.356		4.11267	1.217787		12.36028	

Table B-4. FWA Assay, Parameter Estimates for the NE Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st1	Run20081123	A	top	87.25	2.52	101.1503	2.010695	76.83506	125.4655	
Ceetox	st1	Run20081123	A	bottom	9.561	2.76	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st1	Run20081123	A	hillslope	-1.589	0.2819	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st1	Run20081123	A	logic50	-6.182	0.0458	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st1	Run20081123	A	Syx	6.408		4.014853	1.155149		9.26666	
Ceetox	st1	Run20081124	A	top	87.7	4.002	101.1503	2.010695	76.83506	125.4655	
Ceetox	st1	Run20081124	A	bottom	0.516	4.848	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st1	Run20081124	A	hillslope	-0.9256	0.183	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st1	Run20081124	A	logic50	-6.335	0.06334	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st1	Run20081124	A	Syx	7.255		4.014853	1.155149		9.26666	
Ceetox	st1	Run20081218	A	top	93.44	2.797	101.1503	2.010695	76.83506	125.4655	
Ceetox	st1	Run20081218	A	bottom	4.302	3.174	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st1	Run20081218	A	hillslope	-1.18	0.1756	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st1	Run20081218	A	logic50	-6.209	0.04404	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st1	Run20081218	A	Syx	6.063		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090124 BAD	A	top	83.44	2.35	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090124 BAD	A	bottom	6.112	2.598	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st2	Run20090124 BAD	A	hillslope	-1.322	0.1997	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090124 BAD	A	logic50	-6.278	0.04394	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090124 BAD	A	Syx	5.437		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090202 BAD	A	top	86.58	3.643	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090202 BAD	A	bottom	-1.926	4.504	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st2	Run20090202 BAD	A	hillslope	-1.191	0.2584	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090202 BAD	A	logic50	-6.233	0.06724	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090202 BAD	A	Syx	8.126		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090223	A	top	94.26	1.61	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090223	A	bottom	10.39	2.022	2.233044	0.733866	-5.42408	9.890167	Above

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st2	Run20090223	A	hillslope	-1.54	0.1778	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090223	A	logic50	-5.998	0.02791	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090223	A	Syx	4.241		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090307	A	top	104.3	2.315	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090307	A	bottom	4.01	2.676	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st2	Run20090307	A	hillslope	-0.9348	0.0913	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090307	A	logic50	-6.167	0.0315	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090307	A	Syx	4.169		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090326	A	top	107.5	8.444	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090326	A	bottom	6.24	4.468	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st2	Run20090326	A	hillslope	-0.7778	0.1777	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090326	A	logic50	-6.307	0.07091	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090326	A	Syx	8.495		4.014853	1.155149		9.26666	
Ceetox	st3	Run20090418	A	top	111.8	3.61	101.1503	2.010695	76.83506	125.4655	
Ceetox	st3	Run20090418	A	bottom	1.535	4.345	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st3	Run20090418	A	hillslope	-0.8563	0.1157	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st3	Run20090418	A	logic50	-6.116	0.04478	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st3	Run20090418	A	Syx	6.035		4.014853	1.155149		9.26666	
Ceetox	st3	Run20090505	A	top	95.98	2.403	101.1503	2.010695	76.83506	125.4655	
Ceetox	st3	Run20090505	A	bottom	0.6021	2.639	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st3	Run20090505	A	hillslope	-0.9611	0.1013	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st3	Run20090505	A	logic50	-6.312	0.0333	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st3	Run20090505	A	Syx	4.36		4.014853	1.155149		9.26666	
Ceetox	st4	Run20090911A	A	top	99.74	2.442	101.1503	2.010695	76.83506	125.4655	
Ceetox	st4	Run20090911A	A	bottom	5.832	3.277	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st4	Run20090911A	A	hillslope	-1.189	0.1623	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st4	Run20090911A	A	logic50	-5.994	0.03897	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st4	Run20090911A	A	Syx	5.642		4.014853	1.155149		9.26666	
Ceetox	st4	Run20090914A	A	top	96.23	2.562	101.1503	2.010695	76.83506	125.4655	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	Run20090914A	A	bottom	8.423	3.516	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st4	Run20090914A	A	hillslope	-1.305	0.2151	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st4	Run20090914A	A	logic50	-5.956	0.04415	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st4	Run20090914A	A	Syx	6.35		4.014853	1.155149		9.26666	
Ceetox	st4	Run20090917A	A	top	92.65	2.234	101.1503	2.010695	76.83506	125.4655	
Ceetox	st4	Run20090917A	A	bottom	10.5	2.831	2.233044	0.733866	-5.42408	9.890167	Above
Ceetox	st4	Run20090917A	A	hillslope	-1.335	0.1983	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st4	Run20090917A	A	logic50	-6.029	0.04001	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st4	Run20090917A	A	Syx	5.462		4.014853	1.155149		9.26666	
Dietrich	st1	Assay03	A	top	100.3	3.144	101.1503	2.010695	76.83506	125.4655	
Dietrich	st1	Assay03	A	bottom	3.191	8.184	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st1	Assay03	A	hillslope	-1.131	0.2594	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st1	Assay03	A	logic50	-5.568	0.05988	-6.32263	0.066788	-6.84392	-5.80134	Above
Dietrich	st1	Assay03	A	Syx	8.268		4.014853	1.155149		9.26666	
Dietrich	st2	Assay04	A	top	101.3	4.004	101.1503	2.010695	76.83506	125.4655	
Dietrich	st2	Assay04	A	bottom	8.795	3.269	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st2	Assay04	A	hillslope	-1.191	0.2113	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st2	Assay04	A	logic50	-6.444	0.05321	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st2	Assay04	A	Syx	7.554		4.014853	1.155149		9.26666	
Dietrich	st2	Assay05	A	top	101.8	1.707	101.1503	2.010695	76.83506	125.4655	
Dietrich	st2	Assay05	A	bottom	2.747	1.663	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st2	Assay05	A	hillslope	-1.111	0.08149	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st2	Assay05	A	logic50	-6.319	0.02258	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st2	Assay05	A	Syx	3.329		4.014853	1.155149		9.26666	
Dietrich	st2	Assay06	A	top	86.61	2.992	101.1503	2.010695	76.83506	125.4655	
Dietrich	st2	Assay06	A	bottom	-1.545	3.986	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st2	Assay06	A	hillslope	-1.25	0.2291	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st2	Assay06	A	logic50	-6.147	0.05267	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st2	Assay06	A	Syx	7.141		4.014853	1.155149		9.26666	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Dietrich	st2	Assay15	A	top	119.1	2.234	101.1503	2.010695	76.83506	125.4655	
Dietrich	st2	Assay15	A	bottom	6.738	2.525	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st2	Assay15	A	hillslope	-0.9707	0.08236	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st2	Assay15	A	logic50	-6.042	0.02948	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st2	Assay15	A	Syx	4.133		4.014853	1.155149		9.26666	
Dietrich	st2	Assay16	A	top	107.9	2.613	101.1503	2.010695	76.83506	125.4655	
Dietrich	st2	Assay16	A	bottom	5.601	3.067	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st2	Assay16	A	hillslope	-0.8866	0.09393	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st2	Assay16	A	logic50	-6.118	0.03522	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st2	Assay16	A	Syx	4.49		4.014853	1.155149		9.26666	
Dietrich	st3	Assay09	A	top	92.51	3.006	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay09	A	bottom	1.25	3.387	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay09	A	hillslope	-0.8539	0.1123	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay09	A	logic50	-6.365	0.04213	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay09	A	Syx	4.895		4.014853	1.155149		9.26666	
Dietrich	st3	Assay10_Part 1	A	top	69.75	3.004	101.1503	2.010695	76.83506	125.4655	Below
Dietrich	st3	Assay10_Part 1	A	bottom	4.139	3.042	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay10_Part 1	A	hillslope	-1.138	0.2287	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay10_Part 1	A	logic50	-6.633	0.07506	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay10_Part 1	A	Syx	6.063		4.014853	1.155149		9.26666	
Dietrich	st3	Assay11	A	top	87.4	4.215	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay11	A	bottom	5.471	4.246	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay11	A	hillslope	-1.141	0.2572	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay11	A	logic50	-6.383	0.06891	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay11	A	Syx	8.502		4.014853	1.155149		9.26666	
Dietrich	st3	Assay12_Part 1	A	top	87.86	2.871	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay12_Part 1	A	bottom	1.78	3.47	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay12_Part 1	A	hillslope	-0.9209	0.1318	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay12_Part 1	A	logic50	-6.325	0.04567	-6.32263	0.066788	-6.84392	-5.80134	

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Dietrich	st3	Assay12_Part 1	A	Syx	5.176		4.014853	1.155149		9.26666	
Dietrich	st3	Assay13	A	top	98.2	2.05	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay13	A	bottom	0.988	2.316	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay13	A	hillslope	-0.8936	0.07704	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay13	A	logic50	-6.287	0.02748	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay13	A	Syx	3.504		4.014853	1.155149		9.26666	
Dietrich	st3	Assay14_Part 1	A	top	84.02	2.789	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay14_Part 1	A	bottom	4.512	3.365	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay14_Part 1	A	hillslope	-1.063	0.1727	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay14_Part 1	A	logic50	-6.283	0.05062	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay14_Part 1	A	Syx	5.71		4.014853	1.155149		9.26666	
Dietrich	st3	Assay15	A	top	119.1	2.234	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay15	A	bottom	6.738	2.525	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay15	A	hillslope	-0.9707	0.08236	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay15	A	logic50	-6.042	0.02948	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay15	A	Syx	4.133		4.014853	1.155149		9.26666	
Dietrich	st3	Assay16	A	top	107.9	2.613	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay16	A	bottom	5.601	3.067	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay16	A	hillslope	-0.8866	0.09393	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay16	A	logic50	-6.118	0.03522	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay16	A	Syx	4.49		4.014853	1.155149		9.26666	
Freyberger	st2	A	A	top	101.1	1.315	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	A	A	bottom	2.751	1.288	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	A	A	hillslope	-0.9461	0.04974	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st2	A	A	logic50	-6.352	0.01686	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	A	A	Syx	2.249		4.014853	1.155149		9.26666	
Freyberger	st2	B	A	top	97.67	1.456	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	B	A	bottom	3.573	1.394	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	B	A	hillslope	-0.9451	0.05686	-0.95808	0.04408	-2.0487	0.132532	

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Freyberger	st2	B	A	logic50	-6.398	0.01922	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	B	A	Syx	2.464		4.014853	1.155149		9.26666	
Freyberger	st2	D	A	top	108.2	1.237	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	D	A	bottom	1.54	1.466	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	D	A	hillslope	-0.8895	0.04306	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st2	D	A	logic50	-6.15	0.01577	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	D	A	Syx	2.14		4.014853	1.155149		9.26666	
Freyberger	st3	CODE A	A	top	105.4	1.081	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE A	A	bottom	4.455	1.261	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st3	CODE A	A	hillslope	-1.025	0.04901	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st3	CODE A	A	logic50	-6.123	0.01512	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE A	A	Syx	2.122		4.014853	1.155149		9.26666	
Freyberger	st3	CODE A1	A	top	105.9	3.894	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE A1	A	bottom	-1.727	4.599	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st3	CODE A1	A	hillslope	-0.7076	0.09548	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st3	CODE A1	A	logic50	-6.271	0.04271	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE A1	A	Syx	5.122		4.014853	1.155149		9.26666	
Freyberger	st3	CODE AB	A	top	101.2	3.064	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE AB	A	bottom	2.796	3.08	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st3	CODE AB	A	hillslope	-0.8713	0.1037	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st3	CODE AB	A	logic50	-6.348	0.03853	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE AB	A	Syx	4.883		4.014853	1.155149		9.26666	
Freyberger	st3	CODE B	A	top	100.6	0.8527	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE B	A	bottom	3.318	0.8956	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st3	CODE B	A	hillslope	-0.9363	0.03319	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st3	CODE B	A	logic50	-6.291	0.01136	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE B	A	Syx	1.485		4.014853	1.155149		9.26666	
Freyberger	st3	CODE B2	A	top	99.25	3.805	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE B2	A	bottom	0.9032	4.239	2.233044	0.733866	-5.42408	9.890167	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Freyberger	st3	CODE B2	A	hillslope	-0.8261	0.1249	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st3	CODE B2	A	logic50	-6.315	0.04848	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE B2	A	Syx	5.951		4.014853	1.155149		9.26666	
JapanCERI	st1	20090113_01	A	top	90.23	1.689	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st1	20090113_01	A	bottom	1.172	1.475	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st1	20090113_01	A	hillslope	-0.9332	0.06563	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st1	20090113_01	A	logic50	-6.589	0.02279	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st1	20090113_01	A	Syx	2.717		4.014853	1.155149		9.26666	
JapanCERI	st1	20090121_02	A	top	99.31	1.086	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st1	20090121_02	A	bottom	2.28	0.859	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st1	20090121_02	A	hillslope	-0.9194	0.03631	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st1	20090121_02	A	logic50	-6.581	0.01261	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st1	20090121_02	A	Syx	1.648		4.014853	1.155149		9.26666	
JapanCERI	st1	20090128_03	A	top	99.9	1.44	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st1	20090128_03	A	bottom	0.9434	1.268	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st1	20090128_03	A	hillslope	-0.8514	0.04416	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st1	20090128_03	A	logic50	-6.505	0.01673	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st1	20090128_03	A	Syx	2.121		4.014853	1.155149		9.26666	
JapanCERI	st2	20090422_01	A	top	103.3	1.253	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st2	20090422_01	A	bottom	1.322	0.9332	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st2	20090422_01	A	hillslope	-0.9155	0.03862	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st2	20090422_01	A	logic50	-6.612	0.01345	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st2	20090422_01	A	Syx	1.841		4.014853	1.155149		9.26666	
JapanCERI	st2	20090427_02	A	top	104.9	1.615	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st2	20090427_02	A	bottom	3.592	1.139	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st2	20090427_02	A	hillslope	-0.9552	0.05212	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st2	20090427_02	A	logic50	-6.626	0.01732	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st2	20090427_02	A	Syx	2.403		4.014853	1.155149		9.26666	
JapanCERI	st2	20090430_03	A	top	98.71	1.033	101.1503	2.010695	76.83506	125.4655	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st2	20090430_03	A	bottom	0.9278	0.8088	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st2	20090430_03	A	hillslope	-0.9261	0.0345	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st2	20090430_03	A	logic50	-6.609	0.01187	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st2	20090430_03	A	Syx	1.572		4.014853	1.155149		9.26666	
JapanCERI	st3	091021_01	A	top	99.69	1.847	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091021_01	A	bottom	-0.6395	1.265	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091021_01	A	hillslope	-0.8521	0.05034	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091021_01	A	logic50	-6.754	0.01884	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091021_01	A	Syx	2.417		4.014853	1.155149		9.26666	
JapanCERI	st3	091026_02	A	top	104.8	2.566	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091026_02	A	bottom	0.01609	1.517	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091026_02	A	hillslope	-0.782	0.05572	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091026_02	A	logic50	-6.829	0.02217	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091026_02	A	Syx	2.791		4.014853	1.155149		9.26666	
JapanCERI	st3	091105_03	A	top	103.3	4.188	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091105_03	A	bottom	-0.5059	2.982	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091105_03	A	hillslope	-0.851	0.1119	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091105_03	A	logic50	-6.681	0.04192	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091105_03	A	Syx	5.582		4.014853	1.155149		9.26666	
JapanCERI	st3	091109_04	A	top	102.9	1.47	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091109_04	A	bottom	-0.7862	0.9984	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091109_04	A	hillslope	-0.8565	0.0389	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091109_04	A	logic50	-6.73	0.01442	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091109_04	A	Syx	1.926		4.014853	1.155149		9.26666	
JapanCERI	st3	091111_06	A	top	103.4	1.77	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091111_06	A	bottom	-1.287	1.305	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091111_06	A	hillslope	-0.8718	0.04925	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091111_06	A	logic50	-6.652	0.01805	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091111_06	A	Syx	2.464		4.014853	1.155149		9.26666	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
JapanCERI	st3	091116_08	A	top	104.1	1.881	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091116_08	A	bottom	0.8289	1.273	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091116_08	A	hillslope	-0.819	0.0468	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091116_08	A	logic50	-6.709	0.01813	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091116_08	A	Syx	2.337		4.014853	1.155149		9.26666	
JapanCERI	st3	091119_11	A	top	106.7	2.3	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091119_11	A	bottom	0.3295	1.55	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091119_11	A	hillslope	-0.9262	0.06633	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091119_11	A	logic50	-6.689	0.02264	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091119_11	A	Syx	3.251		4.014853	1.155149		9.26666	
Lovelace	st1	Run16Dec08	A	top	122.6	4.321	101.1503	2.010695	76.83506	125.4655	
Lovelace	st1	Run16Dec08	A	bottom	8.313	5.444	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st1	Run16Dec08	A	hillslope	-1.008	0.1754	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st1	Run16Dec08	A	logic50	-5.905	0.06078	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st1	Run16Dec08	A	Syx	8.587		4.014853	1.155149		9.26666	
Lovelace	st12	Run06Oct09	A	top	123.2	1.964	101.1503	2.010695	76.83506	125.4655	
Lovelace	st12	Run06Oct09	A	bottom	6.671	2.22	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run06Oct09	A	hillslope	-0.9517	0.06775	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run06Oct09	A	logic50	-6.018	0.02536	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run06Oct09	A	Syx	3.569		4.014853	1.155149		9.26666	
Lovelace	st12	Run09July10 EtOH_Buffer	A	top	102.1	2.005	101.1503	2.010695	76.83506	125.4655	
Lovelace	st12	Run09July10 EtOH_Buffer	A	bottom	4.864	1.73	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run09July10 EtOH_Buffer	A	hillslope	-0.8813	0.06523	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run09July10 EtOH_Buffer	A	logic50	-6.453	0.02408	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run09July10 EtOH_Buffer	A	Syx	3.035		4.014853	1.155149		9.26666	
Lovelace	st12	Run09Oct09 EtOH	A	top	113.2	2.324	101.1503	2.010695	76.83506	125.4655	
Lovelace	st12	Run09Oct09 EtOH	A	bottom	-1.417	2.991	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run09Oct09 EtOH	A	hillslope	-0.8271	0.07023	-0.95808	0.04408	-2.0487	0.132532	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st12	Run09Oct09 EtOH	A	logic50	-6.089	0.02783	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run09Oct09 EtOH	A	Syx	3.825		4.014853	1.155149		9.26666	
Lovelace	st12	Run14Oct09 EtOH	A	top	110	4.458	101.1503	2.010695	76.83506	125.4655	
Lovelace	st12	Run14Oct09 EtOH	A	bottom	-5.157	6.64	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run14Oct09 EtOH	A	hillslope	-0.7725	0.1293	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run14Oct09 EtOH	A	logic50	-6.068	0.05287	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run14Oct09 EtOH	A	Syx	7.064		4.014853	1.155149		9.26666	
Lovelace	st12	Run25Sep09 EtOH	A	top	100.6	4.742	101.1503	2.010695	76.83506	125.4655	
Lovelace	st12	Run25Sep09 EtOH	A	bottom	4.233	4.654	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run25Sep09 EtOH	A	hillslope	-1.185	0.2575	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run25Sep09 EtOH	A	logic50	-6.298	0.06542	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run25Sep09 EtOH	A	Syx	9.715		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run01May09EtOH	A	top	100.4	2.449	101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run01May09EtOH	A	bottom	8.912	2.61	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run01May09EtOH	A	hillslope	-1.046	0.1206	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run01May09EtOH	A	logic50	-6.197	0.03664	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run01May09EtOH	A	Syx	4.728		4.014853	1.155149		9.26666	
Lovelace	st2	Run21April09EtOH	A	top	123.8	4.214	101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run21April09EtOH	A	bottom	-1.268	4.156	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run21April09EtOH	A	hillslope	-0.7302	0.0859	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run21April09EtOH	A	logic50	-6.239	0.04018	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run21April09EtOH	A	Syx	5.397		4.014853	1.155149		9.26666	
Lovelace	st2	Run24Feb09EtOH	A	top	105.5	3.795	101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run24Feb09EtOH	A	bottom	-2.363	3.862	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run24Feb09EtOH	A	hillslope	-0.7713	0.09848	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run24Feb09EtOH	A	logic50	-6.381	0.04108	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run24Feb09EtOH	A	Syx	5.287		4.014853	1.155149		9.26666	
Lovelace	st3	Run19Jun09EtOH	A	top	98.75	2.102	101.1503	2.010695	76.83506	125.4655	
Lovelace	st3	Run19Jun09EtOH	A	bottom	-1.097	2.29	2.233044	0.733866	-5.42408	9.890167	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	Run19Jun09EtOH	A	hillslope	-0.8476	0.06984	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run19Jun09EtOH	A	logic50	-6.351	0.02642	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run19Jun09EtOH	A	Syx	3.354		4.014853	1.155149		9.26666	
Lovelace	st3	Run30Jun09EtOH	A	top	105.8	3.514	101.1503	2.010695	76.83506	125.4655	
Lovelace	st3	Run30Jun09EtOH	A	bottom	-0.8078	3.475	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st3	Run30Jun09EtOH	A	hillslope	-0.7111	0.08095	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run30Jun09EtOH	A	logic50	-6.403	0.03614	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run30Jun09EtOH	A	Syx	4.343		4.014853	1.155149		9.26666	
Missouri	st1	Run3005	A	top	106.3	2.817	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run3005	A	bottom	6.123	2.472	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run3005	A	hillslope	-1.023	0.112	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run3005	A	logic50	-6.369	0.03534	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run3005	A	Syx	4.924		4.014853	1.155149		9.26666	
Missouri	st1	Run3006	A	top	90.53	2.083	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run3006	A	bottom	3.662	1.621	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run3006	A	hillslope	-1.082	0.09861	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run3006	A	logic50	-6.64	0.02801	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run3006	A	Syx	3.595		4.014853	1.155149		9.26666	
Missouri	st1	Run3008	A	top	106.5	2.074	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run3008	A	bottom	3.215	1.538	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run3008	A	hillslope	-0.8259	0.05419	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run3008	A	logic50	-6.576	0.02122	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run3008	A	Syx	2.727		4.014853	1.155149		9.26666	
Missouri	st1	Run7003	A	top	102.2	1.574	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run7003	A	bottom	0.8183	1.544	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run7003	A	hillslope	-0.9501	0.05819	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run7003	A	logic50	-6.359	0.01959	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run7003	A	Syx	2.705		4.014853	1.155149		9.26666	
Missouri	st1	Run7004	A	top	109.3	2.413	101.1503	2.010695	76.83506	125.4655	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st1	Run7004	A	bottom	0.7381	2.143	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run7004	A	hillslope	-0.9441	0.07886	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run7004	A	logic50	-6.395	0.02716	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run7004	A	Syx	3.954		4.014853	1.155149		9.26666	
Missouri	st1	Run7005	A	top	101.2	1.552	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run7005	A	bottom	0.09925	1.397	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run7005	A	hillslope	-0.8916	0.05033	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run7005	A	logic50	-6.469	0.01817	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run7005	A	Syx	2.421		4.014853	1.155149		9.26666	
Missouri	st1	Run7006	A	top	110.6	4.08	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run7006	A	bottom	1.228	3.359	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run7006	A	hillslope	-0.7913	0.09878	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run7006	A	logic50	-6.47	0.0409	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run7006	A	Syx	5.359		4.014853	1.155149		9.26666	
Missouri	st1	Run7007	A	top	107.8	1.584	101.1503	2.010695	76.83506	125.4655	
Missouri	st1	Run7007	A	bottom	0.9203	1.448	2.233044	0.733866	-5.42408	9.890167	
Missouri	st1	Run7007	A	hillslope	-0.8423	0.04498	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st1	Run7007	A	logic50	-6.398	0.0175	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st1	Run7007	A	Syx	2.342		4.014853	1.155149		9.26666	
Missouri	st2	Run9003	A	top	105.5	1.188	101.1503	2.010695	76.83506	125.4655	
Missouri	st2	Run9003	A	bottom	0.1107	1.264	2.233044	0.733866	-5.42408	9.890167	
Missouri	st2	Run9003	A	hillslope	-0.951	0.04393	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st2	Run9003	A	logic50	-6.262	0.0148	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st2	Run9003	A	Syx	2.109		4.014853	1.155149		9.26666	
Missouri	st2	Run9004	A	top	102.1	1.822	101.1503	2.010695	76.83506	125.4655	
Missouri	st2	Run9004	A	bottom	1.952	1.972	2.233044	0.733866	-5.42408	9.890167	
Missouri	st2	Run9004	A	hillslope	-0.972	0.07387	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st2	Run9004	A	logic50	-6.253	0.02415	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st2	Run9004	A	Syx	3.322		4.014853	1.155149		9.26666	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st2	Run9005	A	top	99.05	2.043	101.1503	2.010695	76.83506	125.4655	
Missouri	st2	Run9005	A	bottom	-0.9134	2.141	2.233044	0.733866	-5.42408	9.890167	
Missouri	st2	Run9005	A	hillslope	-1.001	0.08542	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st2	Run9005	A	logic50	-6.327	0.02683	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st2	Run9005	A	Syx	3.775		4.014853	1.155149		9.26666	
Missouri	st2	Run9007	A	top	99.57	2.872	101.1503	2.010695	76.83506	125.4655	
Missouri	st2	Run9007	A	bottom	-2.793	2.857	2.233044	0.733866	-5.42408	9.890167	
Missouri	st2	Run9007	A	hillslope	-0.8204	0.0851	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st2	Run9007	A	logic50	-6.449	0.03341	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st2	Run9007	A	Syx	4.269		4.014853	1.155149		9.26666	
Missouri	st3	Run8003	A	top	96.53	1.595	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8003	A	bottom	-0.3032	3.011	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8003	A	hillslope	-0.9015	0.07882	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8003	A	logic50	-5.92	0.0255	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8003	A	Syx	3.2		4.014853	1.155149		9.26666	
Missouri	st3	Run8004	A	top	106.3	2.985	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8004	A	bottom	1.952	3.048	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8004	A	hillslope	-0.9693	0.1125	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8004	A	logic50	-6.272	0.03741	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8004	A	Syx	5.307		4.014853	1.155149		9.26666	
Missouri	st3	Run8005	A	top	92.07	2.114	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8005	A	bottom	-0.3448	3.386	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8005	A	hillslope	-0.8589	0.09345	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8005	A	logic50	-6.107	0.03308	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8005	A	Syx	3.869		4.014853	1.155149		9.26666	
Missouri	st3	Run8101	A	top	107.8	2.653	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8101	A	bottom	-1.618	2.576	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8101	A	hillslope	-0.7602	0.06507	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8101	A	logic50	-6.393	0.02765	-6.32263	0.066788	-6.84392	-5.80134	

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Missouri	st3	Run8101	A	Syx	3.561		4.014853	1.155149		9.26666	
Missouri	st3	Run8102	A	top	95.74	2.27	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8102	A	bottom	-0.1939	2.334	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8102	A	hillslope	-0.8221	0.07306	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8102	A	logic50	-6.435	0.02862	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8102	A	Syx	3.426		4.014853	1.155149		9.26666	
Missouri	st3	Run8107	A	top	107.6	5.583	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8107	A	bottom	-4.246	5.628	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8107	A	hillslope	-0.5927	0.09479	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8107	A	logic50	-6.441	0.0467	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8107	A	Syx	5.19		4.014853	1.155149		9.26666	
Missouri	st4	Run1101	A	top	117.5	4.362	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1101	A	bottom	2.224	3.935	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1101	A	hillslope	-0.916	0.134	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1101	A	logic50	-6.32	0.05122	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1101	A	Syx	6.923		4.014853	1.155149		9.26666	
Missouri	st4	Run1102	A	top	106.9	3.412	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1102	A	bottom	2.997	3.476	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1102	A	hillslope	-0.8624	0.1084	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1102	A	logic50	-6.284	0.04143	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1102	A	Syx	5.408		4.014853	1.155149		9.26666	
Missouri	st4	Run1103	A	top	96.97	2.973	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1103	A	bottom	-5.149	4.028	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1103	A	hillslope	-0.7122	0.08262	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1103	A	logic50	-6.308	0.03596	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1103	A	Syx	4.137		4.014853	1.155149		9.26666	
Missouri	st4	Run1104	A	top	110.6	3.174	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1104	A	bottom	4.367	3.328	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1104	A	hillslope	-0.8944	0.1055	-0.95808	0.04408	-2.0487	0.132532	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	Run1104	A	logic50	-6.205	0.03957	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1104	A	Syx	5.282		4.014853	1.155149		9.26666	
Missouri	st4	Run1106	A	top	103.3	2.009	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1106	A	bottom	2.723	1.994	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1106	A	hillslope	-1.07	0.09008	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1106	A	logic50	-6.296	0.0263	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1106	A	Syx	3.838		4.014853	1.155149		9.26666	
Missouri	st4	Run1107	A	top	114.6	1.61	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1107	A	bottom	-1.845	1.649	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1107	A	hillslope	-0.7609	0.03805	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1107	A	logic50	-6.287	0.01652	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1107	A	Syx	2.21		4.014853	1.155149		9.26666	
Missouri	st4	Run1108	A	top	96.26	1.569	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1108	A	bottom	-5.248	1.309	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1108	A	hillslope	-0.9096	0.05049	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1108	A	logic50	-6.633	0.01803	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1108	A	Syx	2.415		4.014853	1.155149		9.26666	
Missouri	st4	Run1109	A	top	99.39	4.744	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1109	A	bottom	-10.36	4.008	2.233044	0.733866	-5.42408	9.890167	Below
Missouri	st4	Run1109	A	hillslope	-0.782	0.1138	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1109	A	logic50	-6.681	0.04769	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1109	A	Syx	6.214		4.014853	1.155149		9.26666	
Missouri	st4	Run1110	A	top	89.77	3.037	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1110	A	bottom	3.647	3.306	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1110	A	hillslope	-0.9839	0.1463	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1110	A	logic50	-6.348	0.047	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1110	A	Syx	5.609		4.014853	1.155149		9.26666	
Ceetox	st3	Run20090418 DMS	DMSO(A)	top	104.9	3.156	101.1503	2.010695	76.83506	125.4655	
Ceetox	st3	Run20090418 DMS	DMSO(A)	bottom	2.711	3.502	2.233044	0.733866	-5.42408	9.890167	

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Ceetox	st3	Run20090418 DMS	DMSO(A)	hillslope	-1.01	0.1346	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st3	Run20090418 DMS	DMSO(A)	logic50	-6.191	0.04224	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st3	Run20090418 DMS	DMSO(A)	Syx	6.009		4.014853	1.155149		9.26666	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	top	90.81	3.239	101.1503	2.010695	76.83506	125.4655	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	bottom	1.62	3.835	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	hillslope	-0.9113	0.1398	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	logic50	-6.313	0.04873	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st3	Run20090505 DMSO	DMSO(A)	Syx	5.739		4.014853	1.155149		9.26666	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	top	95.51	2.416	101.1503	2.010695	76.83506	125.4655	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	bottom	10.48	2.959	2.233044	0.733866	-5.42408	9.890167	Above
Ceetox	st3	Run20090514 DMSO	DMSO(A)	hillslope	-1.258	0.184	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	logic50	-6.052	0.04157	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st3	Run20090514 DMSO	DMSO(A)	Syx	5.625		4.014853	1.155149		9.26666	
Freyberger	st2	E	DMSO(A)	top	99.88	1.18	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	E	DMSO(A)	bottom	1.359	1.183	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	E	DMSO(A)	hillslope	-0.8943	0.04141	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st2	E	DMSO(A)	logic50	-6.371	0.01489	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	E	DMSO(A)	Syx	1.93		4.014853	1.155149		9.26666	
Freyberger	st2	F	DMSO(A)	top	100.4	1.963	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	F	DMSO(A)	bottom	3.15	1.7	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	F	DMSO(A)	hillslope	-0.9979	0.077	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st2	F	DMSO(A)	logic50	-6.461	0.0244	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	F	DMSO(A)	Syx	3.341		4.014853	1.155149		9.26666	
Freyberger	st2	G	DMSO(A)	top	86.43	1.274	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	G	DMSO(A)	bottom	4.953	1.207	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	G	DMSO(A)	hillslope	-1.16	0.07807	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st2	G	DMSO(A)	logic50	-6.454	0.0205	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	G	DMSO(A)	Syx	2.534		4.014853	1.155149		9.26666	
JapanCERI	st3	091110_05	DMSO(A)	top	100.9	2.944	101.1503	2.010695	76.83506	125.4655	

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JapanCERI	st3	091110_05	DMSO(A)	bottom	0.08526	1.97	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091110_05	DMSO(A)	hillslope	-0.8589	0.08002	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091110_05	DMSO(A)	logic50	-6.755	0.02957	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091110_05	DMSO(A)	Syx	3.839		4.014853	1.155149		9.26666	
JapanCERI	st3	091112_07	DMSO(A)	top	102.4	2.426	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091112_07	DMSO(A)	bottom	-1.66	1.592	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091112_07	DMSO(A)	hillslope	-0.8555	0.06302	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091112_07	DMSO(A)	logic50	-6.777	0.02335	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091112_07	DMSO(A)	Syx	3.118		4.014853	1.155149		9.26666	
JapanCERI	st3	091117_09	DMSO(A)	top	100.3	2.65	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091117_09	DMSO(A)	bottom	1.967	1.611	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091117_09	DMSO(A)	hillslope	-0.9224	0.07883	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091117_09	DMSO(A)	logic50	-6.831	0.02669	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091117_09	DMSO(A)	Syx	3.532		4.014853	1.155149		9.26666	
JapanCERI	st3	091118_10	DMSO(A)	top	102.6	1.702	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091118_10	DMSO(A)	bottom	1.664	1.069	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091118_10	DMSO(A)	hillslope	-0.9321	0.05077	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091118_10	DMSO(A)	logic50	-6.781	0.01703	-6.32263	0.066788	-6.84392	-5.80134	
JapanCERI	st3	091118_10	DMSO(A)	Syx	2.333		4.014853	1.155149		9.26666	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	top	104.5	4.182	101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	bottom	6.286	2.818	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	hillslope	-0.9845	0.1429	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	logic50	-6.648	0.04585	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run17Feb09DMSO	DMSO(A)	Syx	6.246		4.014853	1.155149		9.26666	
Missouri	st3	Run8201 DMSO	DMSO(A)	top	93.66	1.159	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8201 DMSO	DMSO(A)	bottom	0.07747	0.9798	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8201 DMSO	DMSO(A)	hillslope	-0.8431	0.03639	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8201 DMSO	DMSO(A)	logic50	-6.622	0.01402	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8201 DMSO	DMSO(A)	Syx	1.659		4.014853	1.155149		9.26666	

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Missouri	st3	Run8203 DMSO	DMSO(A)	top	94.2	2.443	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8203 DMSO	DMSO(A)	bottom	2.688	2.013	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8203 DMSO	DMSO(A)	hillslope	-1.036	0.1054	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8203 DMSO	DMSO(A)	logic50	-6.563	0.03167	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8203 DMSO	DMSO(A)	Syx	4.191		4.014853	1.155149		9.26666	
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	top	147.4	7.937	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	bottom	-6.392	5.638	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	hillslope	-0.7123	0.1103	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	logic50	-6.399	0.05391	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run14Feb09DMSO	DMSO(U)	Syx	8.409		4.014853	1.155149		9.26666	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	top	132.3	4.034	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	bottom	1.349	3.159	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	hillslope	-0.8875	0.09449	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	logic50	-6.356	0.03812	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run19Feb09DMSO	DMSO(U)	Syx	5.886		4.014853	1.155149		9.26666	
Lovelace	st3	Run03May09DMSO	DMSO(U)	top	143.5	6.659	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run03May09DMSO	DMSO(U)	bottom	12.39	7.022	2.233044	0.733866	-5.42408	9.890167	Above
Lovelace	st3	Run03May09DMSO	DMSO(U)	hillslope	-1.283	0.3101	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run03May09DMSO	DMSO(U)	logic50	-5.936	0.08894	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run03May09DMSO	DMSO(U)	Syx	14.83		4.014853	1.155149		9.26666	Above
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	top	132.9	3.037	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	bottom	9.605	2.646	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	hillslope	-1.258	0.1345	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	logic50	-6.203	0.03699	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run03May09DMSO_2	DMSO(U)	Syx	6.117		4.014853	1.155149		9.26666	
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	top	127.1	2.894	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	bottom	-11.55	3.187	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	hillslope	-0.801	0.06399	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	logic50	-6.214	0.02655	-6.32263	0.066788	-6.84392	-5.80134	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	Run03May09DMSO_3	DMSO(U)	Syx	4.35		4.014853	1.155149		9.26666	
Missouri	st3	Run8202 DMSO	DMSO(U)	top	81.45	0.9288	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8202 DMSO	DMSO(U)	bottom	1.228	0.7933	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8202 DMSO	DMSO(U)	hillslope	-0.9162	0.03863	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8202 DMSO	DMSO(U)	logic50	-6.732	0.01459	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8202 DMSO	DMSO(U)	Syx	1.455		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090128 BAD	U	top	72.81	3.16	101.1503	2.010695	76.83506	125.4655	Below
Ceetox	st2	Run20090128 BAD	U	bottom	4.687	3.581	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st2	Run20090128 BAD	U	hillslope	-1.342	0.3171	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090128 BAD	U	logic50	-6.381	0.07706	-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090128 BAD	U	Syx	7.449		4.014853	1.155149		9.26666	
Ceetox	st2	Run20090213 TEST4	U	top	81.58	5.844	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090213 TEST4	U	bottom	5.833	5.844	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st2	Run20090213 TEST4	U	hillslope			-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090213 TEST4	U	logic50			-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090213 TEST4	U	Syx	20.24		4.014853	1.155149		9.26666	Above
Ceetox	st2	Run20090213 TEST4_2	U	top	82.81	5.401	101.1503	2.010695	76.83506	125.4655	
Ceetox	st2	Run20090213 TEST4_2	U	bottom	16.43	5.401	2.233044	0.733866	-5.42408	9.890167	Above
Ceetox	st2	Run20090213 TEST4_2	U	hillslope			-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st2	Run20090213 TEST4_2	U	logic50			-6.32263	0.066788	-6.84392	-5.80134	
Ceetox	st2	Run20090213 TEST4_2	U	Syx	18.71		4.014853	1.155149		9.26666	Above
Ceetox	st3	Run20090426	U	top	108.1	1.499	101.1503	2.010695	76.83506	125.4655	
Ceetox	st3	Run20090426	U	bottom	2.797	4.532	2.233044	0.733866	-5.42408	9.890167	
Ceetox	st3	Run20090426	U	hillslope	-1.66	0.2116	-0.95808	0.04408	-2.0487	0.132532	
Ceetox	st3	Run20090426	U	logic50	-5.297	0.0293	-6.32263	0.066788	-6.84392	-5.80134	Above
Ceetox	st3	Run20090426	U	Syx	5.05		4.014853	1.155149		9.26666	
Dietrich	st1	Assay01	U	top	205.4	6.394	101.1503	2.010695	76.83506	125.4655	Above
Dietrich	st1	Assay01	U	bottom	15.8	11.91	2.233044	0.733866	-5.42408	9.890167	Above
Dietrich	st1	Assay01	U	hillslope	-1.252	0.2712	-0.95808	0.04408	-2.0487	0.132532	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Dietrich	st1	Assay01	U	logic50	-5.242	0.09183	-6.32263	0.066788	-6.84392	-5.80134	Above
Dietrich	st1	Assay01	U	Syx	16.87		4.014853	1.155149		9.26666	Above
Dietrich	st1	Assay02	U	top	133.2	3.959	101.1503	2.010695	76.83506	125.4655	Above
Dietrich	st1	Assay02	U	bottom	-9.912	11	2.233044	0.733866	-5.42408	9.890167	Below
Dietrich	st1	Assay02	U	hillslope	-0.6568	0.09777	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st1	Assay02	U	logic50	-5.522	0.0469	-6.32263	0.066788	-6.84392	-5.80134	Above
Dietrich	st1	Assay02	U	Syx	5.954		4.014853	1.155149		9.26666	
Dietrich	st3	Assay07	U	top	109.2	4.631	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay07	U	bottom	-4.078	6.134	2.233044	0.733866	-5.42408	9.890167	
Dietrich	st3	Assay07	U	hillslope	-0.6062	0.09076	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay07	U	logic50	-6.209	0.04482	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay07	U	Syx	5.003		4.014853	1.155149		9.26666	
Dietrich	st3	Assay08	U	top	122.4	10.36	101.1503	2.010695	76.83506	125.4655	
Dietrich	st3	Assay08	U	bottom	-11.88	10.49	2.233044	0.733866	-5.42408	9.890167	Below
Dietrich	st3	Assay08	U	hillslope	-0.4621	0.1039	-0.95808	0.04408	-2.0487	0.132532	
Dietrich	st3	Assay08	U	logic50	-6.372	0.05292	-6.32263	0.066788	-6.84392	-5.80134	
Dietrich	st3	Assay08	U	Syx	5.686		4.014853	1.155149		9.26666	
Freyberger	st2	C	U	top	83.13	1.438	101.1503	2.010695	76.83506	125.4655	
Freyberger	st2	C	U	bottom	2.843	1.476	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st2	C	U	hillslope	-0.9498	0.06851	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st2	C	U	logic50	-6.506	0.02389	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st2	C	U	Syx	2.515		4.014853	1.155149		9.26666	
Freyberger	st3	CODE A2	U	top	101	3.376	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE A2	U	bottom	8.215	3.594	2.233044	0.733866	-5.42408	9.890167	
Freyberger	st3	CODE A2	U	hillslope	-1.834	0.3852	-0.95808	0.04408	-2.0487	0.132532	
Freyberger	st3	CODE A2	U	logic50	-6.119	0.05011	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE A2	U	Syx	9.008		4.014853	1.155149		9.26666	
Freyberger	st3	CODE B1	U	top	93.03	2.636	101.1503	2.010695	76.83506	125.4655	
Freyberger	st3	CODE B1	U	bottom	5.836	2.408	2.233044	0.733866	-5.42408	9.890167	

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Freyberger	st3	CODE B1	U	hillslope	-3.426	1.756	-0.95808	0.04408	-2.0487	0.132532	Below
Freyberger	st3	CODE B1	U	logic50	-6.473	0.03447	-6.32263	0.066788	-6.84392	-5.80134	
Freyberger	st3	CODE B1	U	Syx	7.317		4.014853	1.155149		9.26666	
JapanCERI	st3	091104_00	U	top	119.4	7.932	101.1503	2.010695	76.83506	125.4655	
JapanCERI	st3	091104_00	U	bottom	-2.695	3.624	2.233044	0.733866	-5.42408	9.890167	
JapanCERI	st3	091104_00	U	hillslope	-0.6654	0.1039	-0.95808	0.04408	-2.0487	0.132532	
JapanCERI	st3	091104_00	U	logic50	-6.888	0.04493	-6.32263	0.066788	-6.84392	-5.80134	Below
JapanCERI	st3	091104_00	U	Syx	5.746		4.014853	1.155149		9.26666	
Lovelace	st1	Run03Dec08	U	top	131.7	7.33	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st1	Run03Dec08	U	bottom	8.104	14.25	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st1	Run03Dec08	U	hillslope	-0.7048	0.1966	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st1	Run03Dec08	U	logic50	-5.541	0.1023	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st1	Run03Dec08	U	Syx	11.17		4.014853	1.155149		9.26666	Above
Lovelace	st1	Run09Dec08	U	top	137.5	8.681	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st1	Run09Dec08	U	bottom	-8.326	17.03	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st1	Run09Dec08	U	hillslope	-0.7003	0.1963	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st1	Run09Dec08	U	logic50	-5.696	0.09461	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st1	Run09Dec08	U	Syx	13.14		4.014853	1.155149		9.26666	Above
Lovelace	st1	Run13Dec08	U	top	106.7	3.187	101.1503	2.010695	76.83506	125.4655	
Lovelace	st1	Run13Dec08	U	bottom	17.29	4.026	2.233044	0.733866	-5.42408	9.890167	Above
Lovelace	st1	Run13Dec08	U	hillslope	-1.294	0.2467	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st1	Run13Dec08	U	logic50	-5.88	0.05831	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st1	Run13Dec08	U	Syx	7.639		4.014853	1.155149		9.26666	
Lovelace	st1	Run27Jan09	U	top	114.6	9.213	101.1503	2.010695	76.83506	125.4655	
Lovelace	st1	Run27Jan09	U	bottom	-4.77	8.134	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st1	Run27Jan09	U	hillslope	-0.646	0.1568	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st1	Run27Jan09	U	logic50	-6.461	0.07465	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st1	Run27Jan09	U	Syx	9.345		4.014853	1.155149		9.26666	Above
Lovelace	st12	Run09July10	U	top	186.9	3.629	101.1503	2.010695	76.83506	125.4655	Above

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st12	Run09July10	U	bottom	9.169	3.123	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run09July10	U	hillslope	-0.8806	0.06444	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run09July10	U	logic50	-5.929	0.03507	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run09July10	U	Syx	5.482		4.014853	1.155149		9.26666	
Lovelace	st12	Run19Aug10EtOH	U	top	623	11.55	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st12	Run19Aug10EtOH	U	bottom	2.568	12.81	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run19Aug10EtOH	U	hillslope	-1.092	0.09137	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run19Aug10EtOH	U	logic50	-5.242	0.06973	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st12	Run19Aug10EtOH	U	Syx	23.43		4.014853	1.155149		9.26666	Above
Lovelace	st12	Run19Aug10EtOH_Buffer	U	top	77.2	1.363	101.1503	2.010695	76.83506	125.4655	
Lovelace	st12	Run19Aug10EtOH_Buffer	U	bottom	0.3089	1.507	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st12	Run19Aug10EtOH_Buffer	U	hillslope	-1.108	0.0888	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st12	Run19Aug10EtOH_Buffer	U	logic50	-6.469	0.02739	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st12	Run19Aug10EtOH_Buffer	U	Syx	2.793		4.014853	1.155149		9.26666	
Lovelace	st2	Run06Feb09EtOH	U	top	125.5	6.898	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st2	Run06Feb09EtOH	U	bottom	-14.18	23.28	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st2	Run06Feb09EtOH	U	hillslope	-0.761	0.2452	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run06Feb09EtOH	U	logic50	-5.487	0.09802	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st2	Run06Feb09EtOH	U	Syx	12.81		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run09Feb09EtOH	U	top	116.4	10.36	101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run09Feb09EtOH	U	bottom	29.32	10.13	2.233044	0.733866	-5.42408	9.890167	Above
Lovelace	st2	Run09Feb09EtOH	U	hillslope	-2.031	1.345	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run09Feb09EtOH	U	logic50	-6.068	0.2213	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run09Feb09EtOH	U	Syx	22.5		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run10April09EtOH	U	top			101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run10April09EtOH	U	bottom			2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run10April09EtOH	U	hillslope			-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run10April09EtOH	U	logic50			-6.32263	0.066788	-6.84392	-5.80134	

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Lovelace	st2	Run10April09EtOH	U	Syx			4.014853	1.155149		9.26666	
Lovelace	st2	Run12Feb09EtOH	U	top			101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run12Feb09EtOH	U	bottom	2.678	8.849	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run12Feb09EtOH	U	hillslope	-0.3076	0.162	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run12Feb09EtOH	U	logic50	-7.555	0.1634	-6.32263	0.066788	-6.84392	-5.80134	Below
Lovelace	st2	Run12Feb09EtOH	U	Syx	12.66		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run13May09EtOH	U	top	156.8	44.66	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st2	Run13May09EtOH	U	bottom	-162.9	558.4	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st2	Run13May09EtOH	U	hillslope	-0.2977	0.3454	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run13May09EtOH	U	logic50	-5.37	0.1527	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st2	Run13May09EtOH	U	Syx	18.83		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run16April09EtOH	U	top	149.2	45.71	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st2	Run16April09EtOH	U	bottom	-37.29	87.47	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st2	Run16April09EtOH	U	hillslope	-0.3465	0.294	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run16April09EtOH	U	logic50	-5.851	0.1625	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run16April09EtOH	U	Syx	16.9		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run24April09EtOH	U	top	138	3.668	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st2	Run24April09EtOH	U	bottom	0.2571	4.479	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run24April09EtOH	U	hillslope	-0.7202	0.07321	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run24April09EtOH	U	logic50	-5.942	0.03763	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run24April09EtOH	U	Syx	5.002		4.014853	1.155149		9.26666	
Lovelace	st2	Run28April09EtOH	U	top	66.59	4.994	101.1503	2.010695	76.83506	125.4655	Below
Lovelace	st2	Run28April09EtOH	U	bottom	17.8	5.907	2.233044	0.733866	-5.42408	9.890167	Above
Lovelace	st2	Run28April09EtOH	U	hillslope	-1.753	1.148	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st2	Run28April09EtOH	U	logic50	-6.225	0.1744	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run28April09EtOH	U	Syx	13.6		4.014853	1.155149		9.26666	Above
Lovelace	st2	Run28May09EtOH	U	top	93.02	4.114	101.1503	2.010695	76.83506	125.4655	
Lovelace	st2	Run28May09EtOH	U	bottom	7.974	4.23	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st2	Run28May09EtOH	U	hillslope	-1.166	0.2525	-0.95808	0.04408	-2.0487	0.132532	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st2	Run28May09EtOH	U	logic50	-6.282	0.06516	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st2	Run28May09EtOH	U	Syx	8.503		4.014853	1.155149		9.26666	
Lovelace	st3	Run10Mar09EtOH	U	top	120.5	4.796	101.1503	2.010695	76.83506	125.4655	
Lovelace	st3	Run10Mar09EtOH	U	bottom	15.67	6.784	2.233044	0.733866	-5.42408	9.890167	Above
Lovelace	st3	Run10Mar09EtOH	U	hillslope			-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run10Mar09EtOH	U	logic50			-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run10Mar09EtOH	U	Syx	16.61		4.014853	1.155149		9.26666	Above
Lovelace	st3	Run13Mar09EtOH	U	top	133.1	8.67	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run13Mar09EtOH	U	bottom	9.092	18.73	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st3	Run13Mar09EtOH	U	hillslope	-0.6645	0.2231	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run13Mar09EtOH	U	logic50	-5.436	0.1212	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st3	Run13Mar09EtOH	U	Syx	12.51		4.014853	1.155149		9.26666	Above
Lovelace	st3	Run17Jun09EtOH	U	top	158.7	4.298	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run17Jun09EtOH	U	bottom	-7.657	4.175	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st3	Run17Jun09EtOH	U	hillslope	-0.6606	0.05656	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run17Jun09EtOH	U	logic50	-6.075	0.03165	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run17Jun09EtOH	U	Syx	4.721		4.014853	1.155149		9.26666	
Lovelace	st3	Run20Mar09EtOH	U	top	53	6.365	101.1503	2.010695	76.83506	125.4655	Below
Lovelace	st3	Run20Mar09EtOH	U	bottom	3.873	7.093	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st3	Run20Mar09EtOH	U	hillslope			-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run20Mar09EtOH	U	logic50			-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run20Mar09EtOH	U	Syx	19.84		4.014853	1.155149		9.26666	Above
Lovelace	st3	Run23Jun09EtOH	U	top	148.4	3.72	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run23Jun09EtOH	U	bottom	5.82	3.879	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st3	Run23Jun09EtOH	U	hillslope	-0.8846	0.09042	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run23Jun09EtOH	U	logic50	-5.959	0.04132	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run23Jun09EtOH	U	Syx	6.109		4.014853	1.155149		9.26666	
Lovelace	st3	Run24Mar09EtOH	U	top	75.67	8.586	101.1503	2.010695	76.83506	125.4655	Below
Lovelace	st3	Run24Mar09EtOH	U	bottom	3.675	11.1	2.233044	0.733866	-5.42408	9.890167	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Lovelace	st3	Run24Mar09EtOH	U	hillslope	-1.41	0.9655	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run24Mar09EtOH	U	logic50	-6.205	0.201	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run24Mar09EtOH	U	Syx	21.82		4.014853	1.155149		9.26666	Above
Lovelace	st3	Run25Jun09EtOH	U	top	151.9	4.006	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run25Jun09EtOH	U	bottom	2.54	4.07	2.233044	0.733866	-5.42408	9.890167	
Lovelace	st3	Run25Jun09EtOH	U	hillslope	-0.7561	0.07289	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run25Jun09EtOH	U	logic50	-5.982	0.03874	-6.32263	0.066788	-6.84392	-5.80134	
Lovelace	st3	Run25Jun09EtOH	U	Syx	5.438		4.014853	1.155149		9.26666	
Lovelace	st3	Run31Mar09EtOH	U	top	375	18.55	101.1503	2.010695	76.83506	125.4655	Above
Lovelace	st3	Run31Mar09EtOH	U	bottom	-6.865	18.41	2.233044	0.733866	-5.42408	9.890167	Below
Lovelace	st3	Run31Mar09EtOH	U	hillslope	-1.098	0.2277	-0.95808	0.04408	-2.0487	0.132532	
Lovelace	st3	Run31Mar09EtOH	U	logic50	-5.649	0.114	-6.32263	0.066788	-6.84392	-5.80134	Above
Lovelace	st3	Run31Mar09EtOH	U	Syx	36.15		4.014853	1.155149		9.26666	Above
Missouri	st3	Run8001	U	top	80.63	2.12	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8001	U	bottom	3.922	2.771	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8001	U	hillslope	-1.111	0.1524	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8001	U	logic50	-6.24	0.04257	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8001	U	Syx	4.618		4.014853	1.155149		9.26666	
Missouri	st3	Run8002	U	top	76.31	1.004	101.1503	2.010695	76.83506	125.4655	Below
Missouri	st3	Run8002	U	bottom	1.491	1.468	2.233044	0.733866	-5.42408	9.890167	
Missouri	st3	Run8002	U	hillslope	-1.016	0.06824	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8002	U	logic50	-6.283	0.02237	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8002	U	Syx	2.105		4.014853	1.155149		9.26666	
Missouri	st3	Run8108	U	top	123.1	8.187	101.1503	2.010695	76.83506	125.4655	
Missouri	st3	Run8108	U	bottom	-8.012	8.206	2.233044	0.733866	-5.42408	9.890167	Below
Missouri	st3	Run8108	U	hillslope	-0.5362	0.1022	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st3	Run8108	U	logic50	-6.318	0.05383	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st3	Run8108	U	Syx	6.27		4.014853	1.155149		9.26666	
Missouri	st4	Run1105	U	top	108.4	5.381	101.1503	2.010695	76.83506	125.4655	

Laboratory	Sub Task	Test ID	Acceptability FWA, NE	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	Run1105	U	bottom	11.59	5.307	2.233044	0.733866	-5.42408	9.890167	Above
Missouri	st4	Run1105	U	hillslope	-0.8635	0.1812	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1105	U	logic50	-6.197	0.07362	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1105	U	Syx	8.433		4.014853	1.155149		9.26666	
Missouri	st4	Run1111	U	top	109.5	3.179	101.1503	2.010695	76.83506	125.4655	
Missouri	st4	Run1111	U	bottom	9.649	3.266	2.233044	0.733866	-5.42408	9.890167	
Missouri	st4	Run1111	U	hillslope	-0.8757	0.1079	-0.95808	0.04408	-2.0487	0.132532	
Missouri	st4	Run1111	U	logic50	-6.175	0.04276	-6.32263	0.066788	-6.84392	-5.80134	
Missouri	st4	Run1111	U	Syx	5.136		4.014853	1.155149		9.26666	

Table B5. List of CERI Norethindrone Test Runs with Prism Fit Results (10% Rule was not applied)

Affected by 10% rule	Laboratory	SubTask	Test Run	Acceptability (E2/NE)	Chemical	Bottom	Top	logIC50	Hillslope	Bottom Std Error	Top Std Error	logIC50 Std Error	Hillslope Std Error	Syx	N
Not	Ceetox	st4	20090903A	A/A	Nethdrone-2	4.799	88.74	-5.614	-0.8843	4.985	3.157	0.1207	0.2237	9.674	24
Not	Ceetox	st4	20090903A	A/A	Nethdrone-3	6.185	90.46	-5.479	-0.8635	1.729	1.043	0.04027	0.07277	3.208	24
Not	Ceetox	st4	20090903A	A/A	Nethdrone	8.655	91.9	-5.524	-1.086	1.338	0.8902	0.0338	0.07913	2.888	24
Not	Ceetox	st4	20090903B	A/A	Nethdrone-4	5.95	88.31	-5.393	-0.9924	2.387	1.463	0.05706	0.127	4.713	24
Not	Ceetox	st4	20090905A	A/A	Nethdrone-1	12.94	103.9	-5.766	-1.237	3.838	2.914	0.09931	0.3994	9.161	24
Not	Ceetox	st4	20090905A	A/A	Nethdrone-2	5.724	97.08	-5.75	-1.101	2.079	1.478	0.04815	0.1423	4.667	24
Not	Ceetox	st4	20090905A	A/A	Nethdrone-3	6.206	102.9	-5.646	-0.9202	2.008	1.385	0.04525	0.09215	4.175	24
Not	Ceetox	st4	20090905B	A/A	Nethdrone-4	7.336	101	-5.569	-1.03	2.175	1.473	0.05038	0.1145	4.668	24
Not	Ceetox	st4	20090907A	A/A	Nethdrone-1	19.63	148.5	-5.246	-0.9902	3.07	2.159	0.07674	0.1219	6.63	24
Not	Ceetox	st4	20090907A	A/A	Nethdrone-2	0.3726	145.5	-5.397	-0.6438	5.116	3.456	0.08703	0.08909	8.611	24
Not	Ceetox	st4	20090907A	A/A	Nethdrone-3	13.88	152.7	-5.343	-0.8896	2.54	1.851	0.05664	0.08251	5.372	24
Not	Ceetox	st4	20090907B	A/A	Nethdrone-4	11.03	148	-5.341	-0.9814	2.549	1.781	0.05367	0.09285	5.47	24
Not	Ceetox	st4	20090930A	A/A	Nethdrone-1	13.75	91.49	-5.246	-1.196	3.219	2.085	0.08034	0.2509	6.95	24
Not	Ceetox	st4	20090930A	A/A	Nethdrone-2	8.697	89.86	-5.502	-0.927	1.524	0.961	0.03799	0.07441	3.007	24
Not	Ceetox	st4	20090930A	A/A	Nethdrone-3	11.71	89.4	-5.348	-1.061	2.387	1.516	0.06119	0.1476	4.942	24
Not	Ceetox	st4	20090930B	A/A	Nethdrone-4	5.98	89.13	-5.348	-0.7914	2.694	1.435	0.05775	0.09711	4.356	24
-3, -4	Missouri	st4	2206	A/A	Nethdrone-1	26.88	90.5	-6.117	-1.278	3.366	2.622	0.1046	0.3644	7.548	21
-3, -4	Missouri	st4	2206	A/A	Nethdrone-2	29.04	98.5	-6.044	-1.372	4.854	3.821	0.1412	0.5432	11.1	21
-3, -4	Missouri	st4	2210	A/A	Nethdrone-1	17.47	81.77	-6.835	-1.752	3.048	3.13	0.134	1.212	9.089	24
-3, -4	Missouri	st4	2210	A/A	Nethdrone-2	17.48	82.74	-6.718	-1.502	4.075	4.137	0.1724	0.7721	11.96	24
-3, -4	Missouri	st4	2211	A/A	Nethdrone-1	24.21	96.97	-6.685	-1.296	4.093	4.495	0.188	0.705	12.07	24
-3	Missouri	st4	2211	A/A	Nethdrone-2	28.39	94.5	-6.396	-1.188	3.455	3.536	0.1716	0.391	9.816	24
-3, -4	Missouri	st4	2301	A/A	Nethdrone-3	26.8	86.63			4.352	4.932			13.66	24
-3, -4	Missouri	st4	2301	A/A	Nethdrone-4	21.72	74.44	-6.791	-1.69	4.415	4.472	0.2285	1.5	13.08	24
-3	Missouri	st4	2302	A/A	Nethdrone-3	18.54	96.83	-6.524	-1.435	5.564	5.615	0.2195	0.6869	16.22	24
-3, -4	Missouri	st4	2302	A/A	Nethdrone-4	47.23	106.9	-6.105	-1.894	6.233	6.318	1.275	3.074	18.59	24
-3, -4	Missouri	st4	2305	A/A	Nethdrone-3		93.83				7.379			19.94	24

3, -4	Missouri	st4	2305	A/A	Nethdrone-4	45.25	82.1			6.339	6.544			19.22	24

Table B6. List of FWA Norethindrone Test Runs with Prism Fit Results (10% Rule was not applied)

Affected by 10% rule	Laboratory	SubTask	Test Run	Acceptance (E2/NE)	Chemical	Bottom	Top	logIC50	Hillslope	Bottom Std Error	Top Std Error	logIC50 Std Error	Hillslope Std Error	Syx	N
Not	Ceetox	st4	20090911A	A/A	Nethdrone-1	4.525	103.5	-5.92	-1.277	2.449	1.981	0.04941	0.2764	6.092	24
Not	Ceetox	st4	20090911A	A/A	Nethdrone-2	2.575	95.84	-6.02	-1.245	2.175	1.81	0.04596	0.2463	5.475	24
Not	Ceetox	st4	20090911A	A/A	Nethdrone-3	3.984	99.21	-6	-0.8754	2.165	1.755	0.05177	0.1072	4.848	24
Not	Ceetox	st4	20090911B	A/A	Nethdrone-4	4.119	89.94	-6.07	-1.678	2.004	1.754	0.04511	0.6484	5.412	24
Not	Ceetox	st4	20090914	A/A	Nethdrone-1	7.501	103.2	-5.935	-1.164	1.657	1.382	0.03673	0.1535	4.119	24
Not	Ceetox	st4	20090914	A/A	Nethdrone-2	8.398	95.23	-6.042	-1.429	1.875	1.67	0.04101	0.3396	5.034	24
Not	Ceetox	st4	20090914	A/A	Nethdrone-3	4.097	101.9	-5.855	-0.8918	1.902	1.437	0.04297	0.09106	4.111	24
Not	Ceetox	st4	20090914B	A/A	Nethdrone-4	6.015	102.1	-5.877	-0.9098	2.4	1.866	0.05605	0.1241	5.318	24
Not	Ceetox	st4	20090917A	A/A	Nethdrone-1	9.475	95.39			2.261	2.083			6.432	24
Not	Ceetox	st4	20090917A	A/A	Nethdrone-2	9.46	87.95	-6.05	-1.803	1.862	1.637	0.04236	0.8736	5.068	24
Not	Ceetox	st4	20090917A	A/A	Nethdrone-3	11.5	83.12	-6.107	-1.954	1.761	1.632	0.07257	1.205	4.978	24
Not	Ceetox	st4	20090917B	A/A	Nethdrone-4	8.139	89.56	-5.963	-0.9511	2.005	1.548	0.05312	0.1327	4.496	24
Not*	Dietrich	st3	Assay10_1	A/A	Nethdrone										24
Not	Dietrich	st3	Assay12_1	A/A	Nethdrone	3.948	69.75	-6.383	-0.9497	2.409	1.247	0.07901	0.1556	4.153	24
Not	Dietrich	st3	Assay13	A/A	Nethdrone	3.128	71.71	-6.383	-0.927	2.482	1.3	0.07648	0.1472	4.286	24
Not	Dietrich	st3	Assay14_1	A/A	Nethdrone	8.378	89.82	-6.017	-1.111	3.827	2.056	0.07433	0.2871	7.043	24
Not	Missouri	st4	1101	A/A	Nethdrone-1	-4.911	89.42	-5.55	-0.937	7.151	2.219	0.09014	0.1985	7.956	24
Not	Missouri	st4	1101	A/A	Nethdrone-2	-5.587	99.82	-5.338	-1.528	6.573	2.708	0.09655	0.4024	10.34	24
Not	Missouri	st4	1102	A/A	Nethdrone-3	3.893	91.12	-5.635	-1.285	2.73	1.107	0.0463	0.1476	4.15	24
Not	Missouri	st4	1102	A/A	Nethdrone-4	-2.428	100.5	-5.465	-1.366	4.637	1.882	0.06743	0.207	7.125	24
Not	Missouri	st4	1103	A/A	Nethdrone-1	-1.739	81.26	-5.763	-1.367	2.479	1.025	0.04361	0.1566	3.868	24
Not	Missouri	st4	1104	A/A	Nethdrone-3	-0.1435	100.6	-5.375	-1.449	2.953	1.21	0.04377	0.1532	4.607	24
Not	Missouri	st4	1104	A/A	Nethdrone-4	1.281	93.47	-5.586	-1.586	5.036	2.147	0.09142	0.3374	8.205	24
Not	Missouri	st4	1105	U/U	Nethdrone-2	18.94	95.33	-5.348	-1.848	3.71	1.614	0.0873	0.3663	6.209	24
Not	Missouri	st4	1106	A/A	Nethdrone-1	1.971	95.17	-5.507	-1.766	5.937	2.571	0.1151	0.4388	9.876	24
Not	Missouri	st4	1106	A/A	Nethdrone-2	0.03966	98.99	-5.334	-1.566	3.574	1.49	0.05604	0.2349	5.701	24
Not	Missouri	st4	1107	A/A	Nethdrone-3	2.016	97.55	-5.372	-1.49	3.21	1.326	0.05106	0.1859	5.059	24

Not	Missouri	st4	1107	A/A	Nethdrone-4	4.492	98.16	-5.515	-1.573	2.526	1.074	0.0455	0.1589	4.103	24
Not	Missouri	st4	1108	A/A	Nethdrone-1	-4.531	120.7	-5.444	-1.614	4.17	1.78	0.05791	0.2008	6.812	24
Not	Missouri	st4	1108	A/A	Nethdrone-2	-7.49	110.5	-5.487	-1.095	6.413	2.367	0.07454	0.1879	8.708	24
Not	Missouri	st4	1109	A/A	Nethdrone-3	-0.4655	86.33	-5.739	-1.455	5.02	2.118	0.08643	0.363	8.027	24
Not	Missouri	st4	1109	A/A	Nethdrone-4	-1.933	92.73	-5.733	-1.922	3.149	1.385	0.06829	0.4594	5.326	24
Not	Missouri	st4	1110	U/A	Nethdrone-1	2.113	89.18	-5.623	-1.688	3.97	1.712	0.07919	0.3239	6.562	24
Not	Missouri	st4	1110	U/A	Nethdrone-2	1.098	78.84	-5.429	-1.978	4.309	1.88	0.1413	0.6635	7.25	24
Not	Missouri	st4	1111	A/U	Nethdrone-1	4.607	90.89			11.58	5.175			20.04	24
Not	Missouri	st4	1111	A/U	Nethdrone-2	4.883	104.4	-5.256	-1.637	8.264	3.476	0.1228	0.6254	13.32	24

“*” All data are flat. No curve fit (the prism fit is not achieved).

Table B7. List of CERI Norethindrone Test Runs with Prism Fit Results after 10% Rule^a

Laboratory	SubTask	Test Run	Acceptability (E2/NE)	Chemical	Bottom	Top	logIC50	Hillslope	Bottom Std Error	Top Std Error	logIC50 Std Error	Hillslope Std Error	Syx	N
Missouri	st4	2206	A/A	Nethdrone-1	8.487	91.52	-6.06	-0.881	6.158	1.597	0.05549	0.1611	4.171	18
Missouri	st4	2206	A/A	Nethdrone-2	3.31	99.56	-5.988	-0.9189	8.983	2.222	0.06742	0.2181	5.908	18
Missouri	st4	2210	A/A	Nethdrone-1	-0.06005	83.78	-6.778	-0.8677	3.865	1.757	0.05689	0.1221	4.302	18
Missouri	st4	2210	A/A	Nethdrone-2	-4.011	84.72	-6.655	-0.817	10.09	3.861	0.1241	0.2486	9.393	18
Missouri	st4	2211	A/A	Nethdrone-1	-0.9157	99.88	-6.552	-0.6844	5.278	2.006	0.05294	0.0901	4.152	18
Missouri	st4	2211	A/A	Nethdrone-2	17.96	94.92	-6.323	-0.9388	2.51	1.895	0.06881	0.1348	4.97	21
Missouri	st4	2301	A/A	Nethdrone-3	8.298	88.14	-6.785	-0.9817	3.454	1.854	0.05843	0.1623	4.648	18
Missouri	st4	2301	A/A	Nethdrone-4	-2.432	75.22	-6.664	-0.87	5.904	2.13	0.08828	0.177	5.445	18
Missouri	st4	2302	A/A	Nethdrone-3	1.817	96.74	-6.408	-1.101	3.416	2.608	0.07387	0.1839	7.256	21
Missouri	st4	2302	A/A	Nethdrone-4	10.87	108	-6.007	-0.8131	10.26	3.137	0.1018	0.2086	7.797	18
Missouri	st4	2305	A/A	Nethdrone-3	21.13	95.32	-6.239	-0.7698	10.62	4.158	0.1725	0.2943	9.59	18
Missouri	st4	2305	A/A	Nethdrone-4	11.75	83.23	-6.415	-0.8711	7.723	2.921	0.114	0.256	7.436	18

a. All Missouri CERI norethindrone runs were affected by the 10% rule. No any other norethindrone runs (in either CERI or FWA protocol) were affected by the 10 rule.

Table B-8. CERi Assay, Parameter Estimates for the Norethindrone Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability CERi, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090903A	A/A	Nethdrone	top	91.9	0.8902	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090903A	A/A	Nethdrone	bottom	8.655	1.338	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090903A	A/A	Nethdrone	hillslope	-1.086	0.07913	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090903A	A/A	Nethdrone	logic50	-5.524	0.0338	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090903A	A/A	Nethdrone	Syx	2.888		5.507225	1.06708		8.509068	
Ceetox	st4	20090903A	A/A	Nethdrone-2	top	88.74	3.157	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090903A	A/A	Nethdrone-2	bottom	4.799	4.985	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090903A	A/A	Nethdrone-2	hillslope	-0.8843	0.2237	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090903A	A/A	Nethdrone-2	logic50	-5.614	0.1207	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090903A	A/A	Nethdrone-2	Syx	9.674		5.507225	1.06708		8.509068	Above
Ceetox	st4	20090903A	A/A	Nethdrone-3	top	90.46	1.043	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090903A	A/A	Nethdrone-3	bottom	6.185	1.729	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090903A	A/A	Nethdrone-3	hillslope	-0.8635	0.07277	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090903A	A/A	Nethdrone-3	logic50	-5.479	0.04027	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090903A	A/A	Nethdrone-3	Syx	3.208		5.507225	1.06708		8.509068	
Ceetox	st4	20090903B	A/A	Nethdrone-4	top	88.31	1.463	96.67374	0.197368	88.39514	104.9523	Below
Ceetox	st4	20090903B	A/A	Nethdrone-4	bottom	5.95	2.387	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090903B	A/A	Nethdrone-4	hillslope	-0.9924	0.127	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090903B	A/A	Nethdrone-4	logic50	-5.393	0.05706	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090903B	A/A	Nethdrone-4	Syx	4.713		5.507225	1.06708		8.509068	
Ceetox	st4	20090905A	A/A	Nethdrone-1	top	103.9	2.914	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090905A	A/A	Nethdrone-1	bottom	12.94	3.838	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090905A	A/A	Nethdrone-1	hillslope	-1.237	0.3994	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090905A	A/A	Nethdrone-1	logic50	-5.766	0.09931	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090905A	A/A	Nethdrone-1	Syx	9.161		5.507225	1.06708		8.509068	Above
Ceetox	st4	20090905A	A/A	Nethdrone-2	top	97.08	1.478	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090905A	A/A	Nethdrone-2	bottom	5.724	2.079	7.142754	1.607092	-6.67592	20.96142	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090905A	A/A	Nethdrone-2	hillslope	-1.101	0.1423	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090905A	A/A	Nethdrone-2	logic50	-5.75	0.04815	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090905A	A/A	Nethdrone-2	Syx	4.667		5.507225	1.06708		8.509068	
Ceetox	st4	20090905A	A/A	Nethdrone-3	top	102.9	1.385	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090905A	A/A	Nethdrone-3	bottom	6.206	2.008	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090905A	A/A	Nethdrone-3	hillslope	-0.9202	0.09215	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090905A	A/A	Nethdrone-3	logic50	-5.646	0.04525	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090905A	A/A	Nethdrone-3	Syx	4.175		5.507225	1.06708		8.509068	
Ceetox	st4	20090905B	A/A	Nethdrone-4	top	101	1.473	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090905B	A/A	Nethdrone-4	bottom	7.336	2.175	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090905B	A/A	Nethdrone-4	hillslope	-1.03	0.1145	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090905B	A/A	Nethdrone-4	logic50	-5.569	0.05038	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090905B	A/A	Nethdrone-4	Syx	4.668		5.507225	1.06708		8.509068	
Ceetox	st4	20090907A	A/A	Nethdrone-1	top	148.5	2.159	96.67374	0.197368	88.39514	104.9523	Above
Ceetox	st4	20090907A	A/A	Nethdrone-1	bottom	19.63	3.07	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090907A	A/A	Nethdrone-1	hillslope	-0.9902	0.1219	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090907A	A/A	Nethdrone-1	logic50	-5.246	0.07674	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090907A	A/A	Nethdrone-1	Syx	6.63		5.507225	1.06708		8.509068	
Ceetox	st4	20090907A	A/A	Nethdrone-2	top	145.5	3.456	96.67374	0.197368	88.39514	104.9523	Above
Ceetox	st4	20090907A	A/A	Nethdrone-2	bottom	0.3726	5.116	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090907A	A/A	Nethdrone-2	hillslope	-0.6438	0.08909	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090907A	A/A	Nethdrone-2	logic50	-5.397	0.08703	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090907A	A/A	Nethdrone-2	Syx	8.611		5.507225	1.06708		8.509068	Above
Ceetox	st4	20090907A	A/A	Nethdrone-3	top	152.7	1.851	96.67374	0.197368	88.39514	104.9523	Above
Ceetox	st4	20090907A	A/A	Nethdrone-3	bottom	13.88	2.54	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090907A	A/A	Nethdrone-3	hillslope	-0.8896	0.08251	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090907A	A/A	Nethdrone-3	logic50	-5.343	0.05664	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090907A	A/A	Nethdrone-3	Syx	5.372		5.507225	1.06708		8.509068	
Ceetox	st4	20090907B	A/A	Nethdrone-4	top	148	1.781	96.67374	0.197368	88.39514	104.9523	Above

Laboratory	Sub Task	Test ID	Acceptability CER1, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090907B	A/A	Nethdrone-4	bottom	11.03	2.549	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090907B	A/A	Nethdrone-4	hillslope	-0.9814	0.09285	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090907B	A/A	Nethdrone-4	logic50	-5.341	0.05367	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090907B	A/A	Nethdrone-4	Syx	5.47		5.507225	1.06708		8.509068	
Ceetox	st4	20090930A	A/A	Nethdrone-1	top	91.49	2.085	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090930A	A/A	Nethdrone-1	bottom	13.75	3.219	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090930A	A/A	Nethdrone-1	hillslope	-1.196	0.2509	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090930A	A/A	Nethdrone-1	logic50	-5.246	0.08034	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090930A	A/A	Nethdrone-1	Syx	6.95		5.507225	1.06708		8.509068	
Ceetox	st4	20090930A	A/A	Nethdrone-2	top	89.86	0.961	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090930A	A/A	Nethdrone-2	bottom	8.697	1.524	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090930A	A/A	Nethdrone-2	hillslope	-0.927	0.07441	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090930A	A/A	Nethdrone-2	logic50	-5.502	0.03799	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090930A	A/A	Nethdrone-2	Syx	3.007		5.507225	1.06708		8.509068	
Ceetox	st4	20090930A	A/A	Nethdrone-3	top	89.4	1.516	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090930A	A/A	Nethdrone-3	bottom	11.71	2.387	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090930A	A/A	Nethdrone-3	hillslope	-1.061	0.1476	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090930A	A/A	Nethdrone-3	logic50	-5.348	0.06119	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090930A	A/A	Nethdrone-3	Syx	4.942		5.507225	1.06708		8.509068	
Ceetox	st4	20090930B	A/A	Nethdrone-4	top	89.13	1.435	96.67374	0.197368	88.39514	104.9523	
Ceetox	st4	20090930B	A/A	Nethdrone-4	bottom	5.98	2.694	7.142754	1.607092	-6.67592	20.96142	
Ceetox	st4	20090930B	A/A	Nethdrone-4	hillslope	-0.7914	0.09711	-0.92998	0.03481	-1.54174	-0.31823	
Ceetox	st4	20090930B	A/A	Nethdrone-4	logic50	-5.348	0.05775	-5.94955	0.331273	-9.08412	-2.81498	
Ceetox	st4	20090930B	A/A	Nethdrone-4	Syx	4.356		5.507225	1.06708		8.509068	
Missouri	st4	2206	A/A	Nethdrone-1	top	91.52	1.597	96.67374	0.197368	88.39514	104.9523	
Missouri	st4	2206	A/A	Nethdrone-1	bottom	8.487	6.158	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2206	A/A	Nethdrone-1	hillslope	-0.881	0.1611	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2206	A/A	Nethdrone-1	logic50	-6.06	0.05549	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2206	A/A	Nethdrone-1	Syx	4.171		5.507225	1.06708		8.509068	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	2206	A/A	Nethdrone-2	top	99.56	2.222	96.67374	0.197368	88.39514	104.9523	
Missouri	st4	2206	A/A	Nethdrone-2	bottom	3.31	8.983	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2206	A/A	Nethdrone-2	hillslope	-0.9189	0.2181	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2206	A/A	Nethdrone-2	logic50	-5.988	0.06742	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2206	A/A	Nethdrone-2	Syx	5.908		5.507225	1.06708		8.509068	
Missouri	st4	2210	A/A	Nethdrone-1	top	83.78	1.757	96.67374	0.197368	88.39514	104.9523	Below
Missouri	st4	2210	A/A	Nethdrone-1	bottom	0.06005	3.865	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2210	A/A	Nethdrone-1	hillslope	-0.8677	0.1221	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2210	A/A	Nethdrone-1	logic50	-6.778	0.05689	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2210	A/A	Nethdrone-1	Syx	4.302		5.507225	1.06708		8.509068	
Missouri	st4	2210	A/A	Nethdrone-2	top	84.72	3.861	96.67374	0.197368	88.39514	104.9523	Below
Missouri	st4	2210	A/A	Nethdrone-2	bottom	-4.011	10.09	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2210	A/A	Nethdrone-2	hillslope	-0.817	0.2486	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2210	A/A	Nethdrone-2	logic50	-6.655	0.1241	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2210	A/A	Nethdrone-2	Syx	9.393		5.507225	1.06708		8.509068	Above
Missouri	st4	2211	A/A	Nethdrone-1	top	99.88	2.006	96.67374	0.197368	88.39514	104.9523	
Missouri	st4	2211	A/A	Nethdrone-1	bottom	-0.9157	5.278	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2211	A/A	Nethdrone-1	hillslope	-0.6844	0.0901	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2211	A/A	Nethdrone-1	logic50	-6.552	0.05294	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2211	A/A	Nethdrone-1	Syx	4.152		5.507225	1.06708		8.509068	
Missouri	st4	2211	A/A	Nethdrone-2	top	94.92	1.895	96.67374	0.197368	88.39514	104.9523	
Missouri	st4	2211	A/A	Nethdrone-2	bottom	17.96	2.51	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2211	A/A	Nethdrone-2	hillslope	-0.9388	0.1348	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2211	A/A	Nethdrone-2	logic50	-6.323	0.06881	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2211	A/A	Nethdrone-2	Syx	4.97		5.507225	1.06708		8.509068	
Missouri	st4	2301	A/A	Nethdrone-3	top	88.14	1.854	96.67374	0.197368	88.39514	104.9523	Below
Missouri	st4	2301	A/A	Nethdrone-3	bottom	8.298	3.454	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2301	A/A	Nethdrone-3	hillslope	-0.9817	0.1623	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2301	A/A	Nethdrone-3	logic50	-6.785	0.05843	-5.94955	0.331273	-9.08412	-2.81498	

Laboratory	Sub Task	Test ID	Acceptability CER1, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	2301	A/A	Nethdrone-3	Syx	4.648		5.507225	1.06708		8.509068	
Missouri	st4	2301	A/A	Nethdrone-4	top	75.22	2.13	96.67374	0.197368	88.39514	104.9523	Below
Missouri	st4	2301	A/A	Nethdrone-4	bottom	-2.432	5.904	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2301	A/A	Nethdrone-4	hillslope	-0.87	0.177	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2301	A/A	Nethdrone-4	logic50	-6.664	0.08828	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2301	A/A	Nethdrone-4	Syx	5.445		5.507225	1.06708		8.509068	
Missouri	st4	2302	A/A	Nethdrone-3	top	96.74	2.608	96.67374	0.197368	88.39514	104.9523	
Missouri	st4	2302	A/A	Nethdrone-3	bottom	1.817	3.416	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2302	A/A	Nethdrone-3	hillslope	-1.101	0.1839	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2302	A/A	Nethdrone-3	logic50	-6.408	0.07387	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2302	A/A	Nethdrone-3	Syx	7.256		5.507225	1.06708		8.509068	
Missouri	st4	2302	A/A	Nethdrone-4	top	108	3.137	96.67374	0.197368	88.39514	104.9523	Above
Missouri	st4	2302	A/A	Nethdrone-4	bottom	10.87	10.26	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2302	A/A	Nethdrone-4	hillslope	-0.8131	0.2086	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2302	A/A	Nethdrone-4	logic50	-6.007	0.1018	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2302	A/A	Nethdrone-4	Syx	7.797		5.507225	1.06708		8.509068	
Missouri	st4	2305	A/A	Nethdrone-3	top	95.32	4.158	96.67374	0.197368	88.39514	104.9523	
Missouri	st4	2305	A/A	Nethdrone-3	bottom	21.13	10.62	7.142754	1.607092	-6.67592	20.96142	Above
Missouri	st4	2305	A/A	Nethdrone-3	hillslope	-0.7698	0.2943	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2305	A/A	Nethdrone-3	logic50	-6.239	0.1725	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2305	A/A	Nethdrone-3	Syx	9.59		5.507225	1.06708		8.509068	Above
Missouri	st4	2305	A/A	Nethdrone-4	top	83.23	2.921	96.67374	0.197368	88.39514	104.9523	Below
Missouri	st4	2305	A/A	Nethdrone-4	bottom	11.75	7.723	7.142754	1.607092	-6.67592	20.96142	
Missouri	st4	2305	A/A	Nethdrone-4	hillslope	-0.8711	0.256	-0.92998	0.03481	-1.54174	-0.31823	
Missouri	st4	2305	A/A	Nethdrone-4	logic50	-6.415	0.114	-5.94955	0.331273	-9.08412	-2.81498	
Missouri	st4	2305	A/A	Nethdrone-4	Syx	7.436		5.507225	1.06708		8.509068	

Table B-9. FWA Assay, Parameter Estimates for the Norethindrone Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090911A	A/A	Nethdrone-1	top	103.5	1.981	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090911A	A/A	Nethdrone-1	bottom	4.525	2.449	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090911A	A/A	Nethdrone-1	hillslope	-1.277	0.2764	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090911A	A/A	Nethdrone-1	logic50	-5.92	0.04941	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090911A	A/A	Nethdrone-1	Syx	6.092		5.578978	1.072085		8.756842	
Ceetox	st4	20090911A	A/A	Nethdrone-2	top	95.84	1.81	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090911A	A/A	Nethdrone-2	bottom	2.575	2.175	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090911A	A/A	Nethdrone-2	hillslope	-1.245	0.2463	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090911A	A/A	Nethdrone-2	logic50	-6.02	0.04596	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090911A	A/A	Nethdrone-2	Syx	5.475		5.578978	1.072085		8.756842	
Ceetox	st4	20090911A	A/A	Nethdrone-3	top	99.21	1.755	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090911A	A/A	Nethdrone-3	bottom	3.984	2.165	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090911A	A/A	Nethdrone-3	hillslope	-0.8754	0.1072	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090911A	A/A	Nethdrone-3	logic50	-6	0.05177	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090911A	A/A	Nethdrone-3	Syx	4.848		5.578978	1.072085		8.756842	
Ceetox	st4	20090911A	A/A	Nethdrone-4	top	89.94	1.754	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090911A	A/A	Nethdrone-4	bottom	4.119	2.004	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090911A	A/A	Nethdrone-4	hillslope	-1.678	0.6484	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090911A	A/A	Nethdrone-4	logic50	-6.07	0.04511	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090911A	A/A	Nethdrone-4	Syx	5.412		5.578978	1.072085		8.756842	
Ceetox	st4	20090914	A/A	Nethdrone-1	top	103.2	1.382	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090914	A/A	Nethdrone-1	bottom	7.501	1.657	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090914	A/A	Nethdrone-1	hillslope	-1.164	0.1535	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090914	A/A	Nethdrone-1	logic50	-5.935	0.03673	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090914	A/A	Nethdrone-1	Syx	4.119		5.578978	1.072085		8.756842	
Ceetox	st4	20090914	A/A	Nethdrone-2	top	95.23	1.67	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090914	A/A	Nethdrone-2	bottom	8.398	1.875	3.325926	2.069262	-13.4306	20.08245	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090914	A/A	Nethdrone-2	hillslope	-1.429	0.3396	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090914	A/A	Nethdrone-2	logic50	-6.042	0.04101	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090914	A/A	Nethdrone-2	Syx	5.034		5.578978	1.072085		8.756842	
Ceetox	st4	20090914	A/A	Nethdrone-3	top	101.9	1.437	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090914	A/A	Nethdrone-3	bottom	4.097	1.902	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090914	A/A	Nethdrone-3	hillslope	-0.8918	0.09106	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090914	A/A	Nethdrone-3	logic50	-5.855	0.04297	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090914	A/A	Nethdrone-3	Syx	4.111		5.578978	1.072085		8.756842	
Ceetox	st4	20090914	A/A	Nethdrone-4	top	102.1	1.866	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090914	A/A	Nethdrone-4	bottom	6.015	2.4	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090914	A/A	Nethdrone-4	hillslope	-0.9098	0.1241	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090914	A/A	Nethdrone-4	logic50	-5.877	0.05605	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090914	A/A	Nethdrone-4	Syx	5.318		5.578978	1.072085		8.756842	
Ceetox	st4	20090917A	A/A	Nethdrone-1	top	95.39	2.083	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090917A	A/A	Nethdrone-1	bottom	9.475	2.261	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090917A	A/A	Nethdrone-1	hillslope			-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090917A	A/A	Nethdrone-1	logic50			-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090917A	A/A	Nethdrone-1	Syx	6.432		5.578978	1.072085		8.756842	
Ceetox	st4	20090917A	A/A	Nethdrone-2	top	87.95	1.637	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090917A	A/A	Nethdrone-2	bottom	9.46	1.862	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090917A	A/A	Nethdrone-2	hillslope	-1.803	0.8736	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090917A	A/A	Nethdrone-2	logic50	-6.05	0.04236	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090917A	A/A	Nethdrone-2	Syx	5.068		5.578978	1.072085		8.756842	
Ceetox	st4	20090917A	A/A	Nethdrone-3	top	83.12	1.632	90.23051	4.912775	51.24825	129.2128	
Ceetox	st4	20090917A	A/A	Nethdrone-3	bottom	11.5	1.761	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090917A	A/A	Nethdrone-3	hillslope	-1.954	1.205	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090917A	A/A	Nethdrone-3	logic50	-6.107	0.07257	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090917A	A/A	Nethdrone-3	Syx	4.978		5.578978	1.072085		8.756842	
Ceetox	st4	20090917A	A/A	Nethdrone-4	top	89.56	1.548	90.23051	4.912775	51.24825	129.2128	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090917A	A/A	Nethdrone-4	bottom	8.139	2.005	3.325926	2.069262	-13.4306	20.08245	
Ceetox	st4	20090917A	A/A	Nethdrone-4	hillslope	-0.9511	0.1327	-1.29458	0.105179	-4.00198	1.412825	
Ceetox	st4	20090917A	A/A	Nethdrone-4	logic50	-5.963	0.05312	-5.92234	0.174425	-7.47507	-4.36961	
Ceetox	st4	20090917A	A/A	Nethdrone-4	Syx	4.496		5.578978	1.072085		8.756842	
Dietrich	st3	competitive Assay10_1 final w2 v25k Nethdrone	A/A	Nethdrone	top			90.23051	4.912775	51.24825	129.2128	
Dietrich	st3	competitive Assay10_1 final w2 v25k Nethdrone	A/A	Nethdrone	bottom			3.325926	2.069262	-13.4306	20.08245	
Dietrich	st3	competitive Assay10_1 final w2 v25k Nethdrone	A/A	Nethdrone	hillslope			-1.29458	0.105179	-4.00198	1.412825	
Dietrich	st3	competitive Assay10_1 final w2 v25k Nethdrone	A/A	Nethdrone	logic50			-5.92234	0.174425	-7.47507	-4.36961	
Dietrich	st3	competitive Assay10_1 final w2 v25k Nethdrone	A/A	Nethdrone	Syx			5.578978	1.072085		8.756842	
Dietrich	st3	competitive Assay12_1 final w2 v25k Nethdrone	A/A	Nethdrone	top	69.75	1.247	90.23051	4.912775	51.24825	129.2128	
Dietrich	st3	competitive Assay12_1 final w2 v25k Nethdrone	A/A	Nethdrone	bottom	3.948	2.409	3.325926	2.069262	-13.4306	20.08245	
Dietrich	st3	competitive Assay12_1 final w2 v25k Nethdrone	A/A	Nethdrone	hillslope	-0.9497	0.1556	-1.29458	0.105179	-4.00198	1.412825	
Dietrich	st3	competitive Assay12_1 final w2 v25k Nethdrone	A/A	Nethdrone	logic50	-6.383	0.07901	-5.92234	0.174425	-7.47507	-4.36961	
Dietrich	st3	competitive Assay12_1 final w2 v25k Nethdrone	A/A	Nethdrone	Syx	4.153		5.578978	1.072085		8.756842	
Dietrich	st3	competitive Assay13 final	A/A	Nethdrone	top	71.71	1.3	90.23051	4.912775	51.24825	129.2128	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
		w2 v25k Nethdrone										
Dietrich	st3	competitive Assay13 final w2 v25k Nethdrone	A/A	Nethdrone	bottom	3.128	2.482	3.325926	2.069262	-13.4306	20.08245	
Dietrich	st3	competitive Assay13 final w2 v25k Nethdrone	A/A	Nethdrone	hillslope	-0.927	0.1472	-1.29458	0.105179	-4.00198	1.412825	
Dietrich	st3	competitive Assay13 final w2 v25k Nethdrone	A/A	Nethdrone	logic50	-6.383	0.07648	-5.92234	0.174425	-7.47507	-4.36961	
Dietrich	st3	competitive Assay13 final w2 v25k Nethdrone	A/A	Nethdrone	Syx	4.286		5.578978	1.072085		8.756842	
Dietrich	st3	competitive Assay14_1 final w2 v25k Nethdrone	A/A	Nethdrone	top	89.82	2.056	90.23051	4.912775	51.24825	129.2128	
Dietrich	st3	competitive Assay14_1 final w2 v25k Nethdrone	A/A	Nethdrone	bottom	8.378	3.827	3.325926	2.069262	-13.4306	20.08245	
Dietrich	st3	competitive Assay14_1 final w2 v25k Nethdrone	A/A	Nethdrone	hillslope	-1.111	0.2871	-1.29458	0.105179	-4.00198	1.412825	
Dietrich	st3	competitive Assay14_1 final w2 v25k Nethdrone	A/A	Nethdrone	logic50	-6.017	0.07433	-5.92234	0.174425	-7.47507	-4.36961	
Dietrich	st3	competitive Assay14_1 final w2 v25k Nethdrone	A/A	Nethdrone	Syx	7.043		5.578978	1.072085		8.756842	
Missouri	st4	1101	A/A	Nethdrone-1	top	89.42	2.219	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1101	A/A	Nethdrone-1	bottom	-4.911	7.151	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1101	A/A	Nethdrone-1	hillslope	-0.937	0.1985	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1101	A/A	Nethdrone-1	logic50	-5.55	0.09014	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1101	A/A	Nethdrone-1	Syx	7.956		5.578978	1.072085		8.756842	
Missouri	st4	1101	A/A	Nethdrone-2	top	99.82	2.708	90.23051	4.912775	51.24825	129.2128	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	1101	A/A	Nethdrone-2	bottom	-5.587	6.573	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1101	A/A	Nethdrone-2	hillslope	-1.528	0.4024	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1101	A/A	Nethdrone-2	logic50	-5.338	0.09655	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1101	A/A	Nethdrone-2	Syx	10.34		5.578978	1.072085		8.756842	Above
Missouri	st4	1102	A/A	Nethdrone-3	top	91.12	1.107	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1102	A/A	Nethdrone-3	bottom	3.893	2.73	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1102	A/A	Nethdrone-3	hillslope	-1.285	0.1476	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1102	A/A	Nethdrone-3	logic50	-5.635	0.0463	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1102	A/A	Nethdrone-3	Syx	4.15		5.578978	1.072085		8.756842	
Missouri	st4	1102	A/A	Nethdrone-4	top	100.5	1.882	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1102	A/A	Nethdrone-4	bottom	-2.428	4.637	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1102	A/A	Nethdrone-4	hillslope	-1.366	0.207	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1102	A/A	Nethdrone-4	logic50	-5.465	0.06743	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1102	A/A	Nethdrone-4	Syx	7.125		5.578978	1.072085		8.756842	
Missouri	st4	1103	A/A	Nethdrone-1	top	81.26	1.025	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1103	A/A	Nethdrone-1	bottom	-1.739	2.479	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1103	A/A	Nethdrone-1	hillslope	-1.367	0.1566	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1103	A/A	Nethdrone-1	logic50	-5.763	0.04361	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1103	A/A	Nethdrone-1	Syx	3.868		5.578978	1.072085		8.756842	
Missouri	st4	1104	A/A	Nethdrone-3	top	100.6	1.21	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1104	A/A	Nethdrone-3	bottom	-0.1435	2.953	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1104	A/A	Nethdrone-3	hillslope	-1.449	0.1532	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1104	A/A	Nethdrone-3	logic50	-5.375	0.04377	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1104	A/A	Nethdrone-3	Syx	4.607		5.578978	1.072085		8.756842	
Missouri	st4	1104	A/A	Nethdrone-4	top	93.47	2.147	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1104	A/A	Nethdrone-4	bottom	1.281	5.036	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1104	A/A	Nethdrone-4	hillslope	-1.586	0.3374	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1104	A/A	Nethdrone-4	logic50	-5.586	0.09142	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1104	A/A	Nethdrone-4	Syx	8.205		5.578978	1.072085		8.756842	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	1106	A/A	Nethdrone-1	top	95.17	2.571	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1106	A/A	Nethdrone-1	bottom	1.971	5.937	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1106	A/A	Nethdrone-1	hillslope	-1.766	0.4388	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1106	A/A	Nethdrone-1	logic50	-5.507	0.1151	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1106	A/A	Nethdrone-1	Syx	9.876		5.578978	1.072085		8.756842	Above
Missouri	st4	1106	A/A	Nethdrone-2	top	98.99	1.49	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1106	A/A	Nethdrone-2	bottom	0.03966	3.574	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1106	A/A	Nethdrone-2	hillslope	-1.566	0.2349	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1106	A/A	Nethdrone-2	logic50	-5.334	0.05604	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1106	A/A	Nethdrone-2	Syx	5.701		5.578978	1.072085		8.756842	
Missouri	st4	1107	A/A	Nethdrone-3	top	97.55	1.326	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1107	A/A	Nethdrone-3	bottom	2.016	3.21	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1107	A/A	Nethdrone-3	hillslope	-1.49	0.1859	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1107	A/A	Nethdrone-3	logic50	-5.372	0.05106	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1107	A/A	Nethdrone-3	Syx	5.059		5.578978	1.072085		8.756842	
Missouri	st4	1107	A/A	Nethdrone-4	top	98.16	1.074	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1107	A/A	Nethdrone-4	bottom	4.492	2.526	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1107	A/A	Nethdrone-4	hillslope	-1.573	0.1589	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1107	A/A	Nethdrone-4	logic50	-5.515	0.0455	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1107	A/A	Nethdrone-4	Syx	4.103		5.578978	1.072085		8.756842	
Missouri	st4	1108	A/A	Nethdrone-1	top	120.7	1.78	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1108	A/A	Nethdrone-1	bottom	-4.531	4.17	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1108	A/A	Nethdrone-1	hillslope	-1.614	0.2008	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1108	A/A	Nethdrone-1	logic50	-5.444	0.05791	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1108	A/A	Nethdrone-1	Syx	6.812		5.578978	1.072085		8.756842	
Missouri	st4	1108	A/A	Nethdrone-2	top	110.5	2.367	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1108	A/A	Nethdrone-2	bottom	-7.49	6.413	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1108	A/A	Nethdrone-2	hillslope	-1.095	0.1879	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1108	A/A	Nethdrone-2	logic50	-5.487	0.07454	-5.92234	0.174425	-7.47507	-4.36961	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	1108	A/A	Nethdrone-2	Syx	8.708		5.578978	1.072085		8.756842	
Missouri	st4	1109	A/A	Nethdrone-3	top	86.33	2.118	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1109	A/A	Nethdrone-3	bottom	-0.4655	5.02	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1109	A/A	Nethdrone-3	hillslope	-1.455	0.363	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1109	A/A	Nethdrone-3	logic50	-5.739	0.08643	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1109	A/A	Nethdrone-3	Syx	8.027		5.578978	1.072085		8.756842	
Missouri	st4	1109	A/A	Nethdrone-4	top	92.73	1.385	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1109	A/A	Nethdrone-4	bottom	-1.933	3.149	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1109	A/A	Nethdrone-4	hillslope	-1.922	0.4594	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1109	A/A	Nethdrone-4	logic50	-5.733	0.06829	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1109	A/A	Nethdrone-4	Syx	5.326		5.578978	1.072085		8.756842	
Missouri	st4	1111	A/U	Nethdrone-1	top	90.89	5.175	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1111	A/U	Nethdrone-1	bottom	4.607	11.58	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1111	A/U	Nethdrone-1	hillslope			-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1111	A/U	Nethdrone-1	logic50			-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1111	A/U	Nethdrone-1	Syx	20.04		5.578978	1.072085		8.756842	Above
Missouri	st4	1111	A/U	Nethdrone-2	top	104.4	3.476	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1111	A/U	Nethdrone-2	bottom	4.883	8.264	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1111	A/U	Nethdrone-2	hillslope	-1.637	0.6254	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1111	A/U	Nethdrone-2	logic50	-5.256	0.1228	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1111	A/U	Nethdrone-2	Syx	13.32		5.578978	1.072085		8.756842	Above
Missouri	st4	1110	U/A	Nethdrone-1	top	89.18	1.712	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1110	U/A	Nethdrone-1	bottom	2.113	3.97	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1110	U/A	Nethdrone-1	hillslope	-1.688	0.3239	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1110	U/A	Nethdrone-1	logic50	-5.623	0.07919	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1110	U/A	Nethdrone-1	Syx	6.562		5.578978	1.072085		8.756842	
Missouri	st4	1110	U/A	Nethdrone-2	top	78.84	1.88	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1110	U/A	Nethdrone-2	bottom	1.098	4.309	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1110	U/A	Nethdrone-2	hillslope	-1.978	0.6635	-1.29458	0.105179	-4.00198	1.412825	

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	Parameter	Estimate	Std Error	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	1110	U/A	Nethdrone-2	logic50	-5.429	0.1413	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1110	U/A	Nethdrone-2	Syx	7.25		5.578978	1.072085		8.756842	
Missouri	st4	1105	U/U	Nethdrone-2	top	95.33	1.614	90.23051	4.912775	51.24825	129.2128	
Missouri	st4	1105	U/U	Nethdrone-2	bottom	18.94	3.71	3.325926	2.069262	-13.4306	20.08245	
Missouri	st4	1105	U/U	Nethdrone-2	hillslope	-1.848	0.3663	-1.29458	0.105179	-4.00198	1.412825	
Missouri	st4	1105	U/U	Nethdrone-2	logic50	-5.348	0.0873	-5.92234	0.174425	-7.47507	-4.36961	
Missouri	st4	1105	U/U	Nethdrone-2	Syx	6.209		5.578978	1.072085		8.756842	

Table B-10. CERI Assay, Parameter Estimates for Log (RBA) for the Norethindrone Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability CERI, E2/NE	Chemical	logic50 (E2)	logic50 stderr (E2)	logic50 (Nethdrone)	logic50 std Error (Nethdrone)	Log(RBA)	Log(RBA) (Std Error)	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090903A	A/A	Nethdrone	-8.349	0.03842	-5.524	0.0338	-2.825	0.051172	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090903A	A/A	Nethdrone-2	-8.349	0.03842	-5.614	0.1207	-2.735	0.126667	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090903A	A/A	Nethdrone-3	-8.349	0.03842	-5.479	0.04027	-2.87	0.055658	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090903B	A/A	Nethdrone-4	-8.349	0.03842	-5.393	0.05706	-2.956	0.068789	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090905A	A/A	Nethdrone-1	-8.654	0.03676	-5.766	0.09931	-2.888	0.105895	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090905A	A/A	Nethdrone-2	-8.654	0.03676	-5.75	0.04815	-2.904	0.060578	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090905A	A/A	Nethdrone-3	-8.654	0.03676	-5.646	0.04525	-3.008	0.0583	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090905B	A/A	Nethdrone-4	-8.654	0.03676	-5.569	0.05038	-3.085	0.062365	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090907A	A/A	Nethdrone-1	-8.413	0.06753	-5.246	0.07674	-3.167	0.102222	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090907A	A/A	Nethdrone-2	-8.413	0.06753	-5.397	0.08703	-3.016	0.110157	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090907A	A/A	Nethdrone-3	-8.413	0.06753	-5.343	0.05664	-3.07	0.088139	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090907B	A/A	Nethdrone-4	-8.413	0.06753	-5.341	0.05367	-3.072	0.08626	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090930A	A/A	Nethdrone-1	-8.391	0.05499	-5.246	0.08034	-3.145	0.097357	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090930A	A/A	Nethdrone-2	-8.391	0.05499	-5.502	0.03799	-2.889	0.066837	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090930A	A/A	Nethdrone-3	-8.391	0.05499	-5.348	0.06119	-3.043	0.082269	-3.08556	0.07924	-3.77888	-2.39223	
Ceetox	st4	20090930B	A/A	Nethdrone-4	-8.391	0.05499	-5.348	0.05775	-3.043	0.079743	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2206	A/A	Nethdrone-1	-9.623	0.05163	-6.06	0.05549	-3.563	0.075794	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2206	A/A	Nethdrone-2	-9.623	0.05163	-5.988	0.06742	-3.635	0.084918	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2210	A/A	Nethdrone-1	-9.92	0.0748	-6.778	0.05689	-3.142	0.093976	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2210	A/A	Nethdrone-2	-9.92	0.0748	-6.655	0.1241	-3.265	0.144899	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2211	A/A	Nethdrone-1	-9.288	0.03404	-6.552	0.05294	-2.736	0.062939	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2211	A/A	Nethdrone-2	-9.288	0.03404	-6.323	0.06881	-2.965	0.076769	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2301	A/A	Nethdrone-3	-9.302	0.04234	-6.785	0.05843	-2.517	0.072158	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2301	A/A	Nethdrone-4	-9.302	0.04234	-6.664	0.08828	-2.638	0.097908	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2302	A/A	Nethdrone-3	-9.27	0.03649	-6.408	0.07387	-2.862	0.082391	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2302	A/A	Nethdrone-4	-9.27	0.03649	-6.007	0.1018	-3.263	0.108142	-3.08556	0.07924	-3.77888	-2.39223	

Laboratory	Sub Task	Test ID	Acceptability CERi, E2/NE	Chemical	logic50 (E2)	logic50 stderr (E2)	logic50 (Nethdrone)	logic50 std Error (Nethdrone)	Log(RBA)	Log(RBA) (Std Error)	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	2305	A/A	Nethdrone-3	-9.766	0.07677	-6.239	0.1725	-3.527	0.188812	-3.08556	0.07924	-3.77888	-2.39223	
Missouri	st4	2305	A/A	Nethdrone-4	-9.766	0.07677	-6.415	0.114	-3.351	0.13744	-3.08556	0.07924	-3.77888	-2.39223	

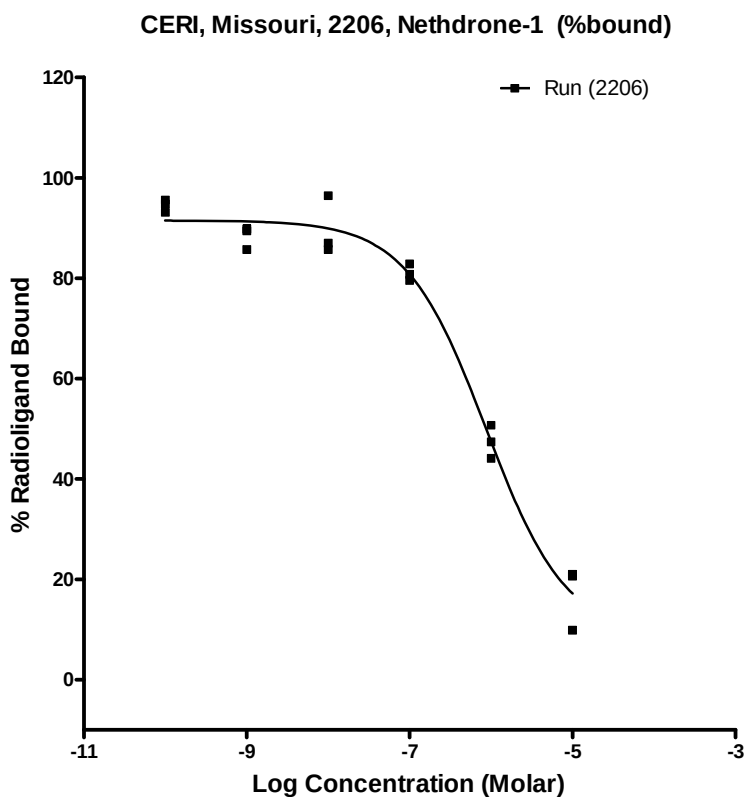
Table B-11. FWA Assay, Parameter Estimates for Log (RBA) for the Norethindrone Runs and the Status of Tolerance Interval Screening

Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	logic50 (E2)	logic50 stderr (E2)	logic50 (Nethdrone)	logic50 std Error (Nethdrone)	Log(RBA)	Log(RBA) (Std Error)	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Ceetox	st4	20090911A	A/A	Nethdrone-1	-9.007	0.03182	-5.92	0.04941	-3.087	0.05877	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090911A	A/A	Nethdrone-2	-9.007	0.03182	-6.02	0.04596	-2.987	0.0559	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090911A	A/A	Nethdrone-3	-9.007	0.03182	-6	0.05177	-3.007	0.060767	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090911B	A/A	Nethdrone-4	-9.007	0.03182	-6.07	0.04511	-2.937	0.055204	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090914	A/A	Nethdrone-1	-8.776	0.03951	-5.935	0.03673	-2.841	0.053946	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090914	A/A	Nethdrone-2	-8.776	0.03951	-6.042	0.04101	-2.734	0.056946	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090914	A/A	Nethdrone-3	-8.776	0.03951	-5.855	0.04297	-2.921	0.058374	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090914B	A/A	Nethdrone-4	-8.776	0.03951	-5.877	0.05605	-2.899	0.068576	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090917A	A/A	Nethdrone-1	-8.746	0.04212					-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090917A	A/A	Nethdrone-2	-8.746	0.04212	-6.05	0.04236	-2.696	0.059737	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090917A	A/A	Nethdrone-3	-8.746	0.04212	-6.107	0.07257	-2.639	0.083908	-2.93057	0.207569	-4.81934	-1.0418	
Ceetox	st4	20090917B	A/A	Nethdrone-4	-8.746	0.04212	-5.963	0.05312	-2.783	0.067793	-2.93057	0.207569	-4.81934	-1.0418	
Dietrich	st3	Assay10_1	A/A	Nethdrone	-8.78	0.02968					-2.93057	0.207569	-4.81934	-1.0418	
Dietrich	st3	Assay12_1	A/A	Nethdrone	-8.918	0.07468	-6.383	0.07901	-2.535	0.108718	-2.93057	0.207569	-4.81934	-1.0418	
Dietrich	st3	Assay13	A/A	Nethdrone	-8.774	0.04195	-6.383	0.07648	-2.391	0.08723	-2.93057	0.207569	-4.81934	-1.0418	
Dietrich	st3	Assay14_1	A/A	Nethdrone	-8.671	0.03945	-6.017	0.07433	-2.654	0.08415	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1101	A/A	Nethdrone-1	-8.883	0.03715	-5.55	0.09014	-3.333	0.097495	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1101	A/A	Nethdrone-2	-8.883	0.03715	-5.338	0.09655	-3.545	0.103451	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1102	A/A	Nethdrone-3	-9	0.04209	-5.635	0.0463	-3.365	0.062572	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1102	A/A	Nethdrone-4	-9	0.04209	-5.465	0.06743	-3.535	0.079488	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1103	A/A	Nethdrone-1	-8.886	0.03433	-5.763	0.04361	-3.123	0.055501	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1104	A/A	Nethdrone-3	-8.841	0.03122	-5.375	0.04377	-3.466	0.053763	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1104	A/A	Nethdrone-4	-8.841	0.03122	-5.586	0.09142	-3.255	0.096604	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1106	A/A	Nethdrone-1	-8.922	0.02482	-5.507	0.1151	-3.415	0.117746	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1106	A/A	Nethdrone-2	-8.922	0.02482	-5.334	0.05604	-3.588	0.06129	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1107	A/A	Nethdrone-3	-9.03	0.02645	-5.372	0.05106	-3.658	0.057504	-2.93057	0.207569	-4.81934	-1.0418	

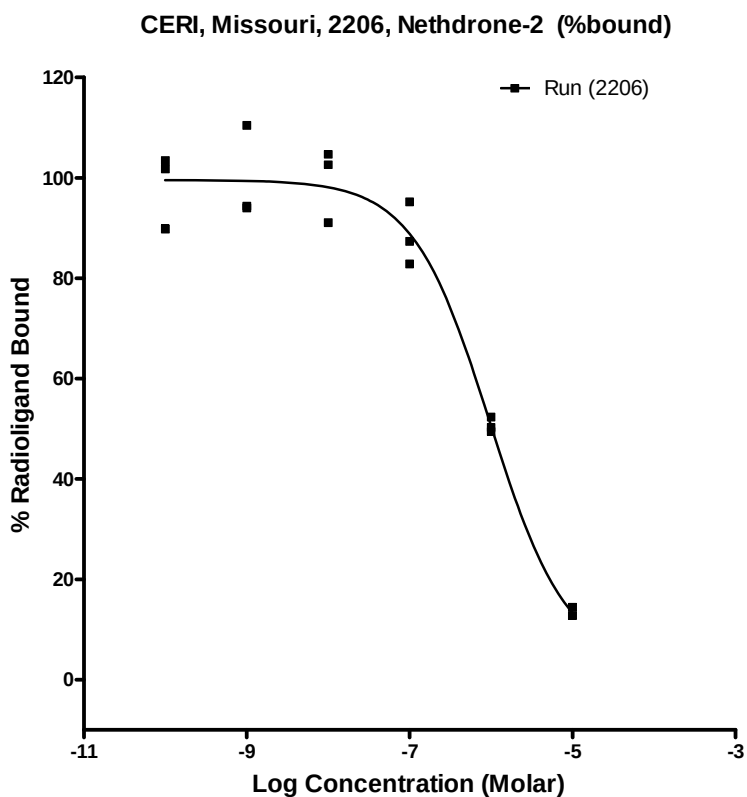
Laboratory	Sub Task	Test ID	Acceptability FWA, E2/NE	Chemical	logic50 (E2)	logic50 stderr (E2)	logic50 (Nethdrone)	logic50 std Error (Nethdrone)	Log(RBA)	Log(RBA) (Std Error)	Mean	Std Error (Mean)	Tolerance Lower	Tolerance Upper	Status
Missouri	st4	1107	A/A	Nethdrone-4	-9.03	0.02645	-5.515	0.0455	-3.515	0.052629	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1108	A/A	Nethdrone-1	-8.888	0.01916	-5.444	0.05791	-3.444	0.060997	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1108	A/A	Nethdrone-2	-8.888	0.01916	-5.487	0.07454	-3.401	0.076963	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1109	A/A	Nethdrone-3	-8.967	0.02483	-5.739	0.08643	-3.228	0.089926	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1109	A/A	Nethdrone-4	-8.967	0.02483	-5.733	0.06829	-3.234	0.072664	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1111	A/U	Nethdrone-1	-8.954	0.04797					-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1111	A/U	Nethdrone-2	-8.954	0.04797	-5.256	0.1228	-3.698	0.131837	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1110	U/A	Nethdrone-1	-9.409	0.0495	-5.623	0.07919	-3.786	0.093388	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1110	U/A	Nethdrone-2	-9.409	0.0495	-5.429	0.1413	-3.98	0.14972	-2.93057	0.207569	-4.81934	-1.0418	
Missouri	st4	1105	U/U	Nethdrone-2	-8.777	0.02571	-5.348	0.0873	-3.429	0.091007	-2.93057	0.207569	-4.81934	-1.0418	

Figure C. Prism Refits After 10% Rule for the Following Test Runs.

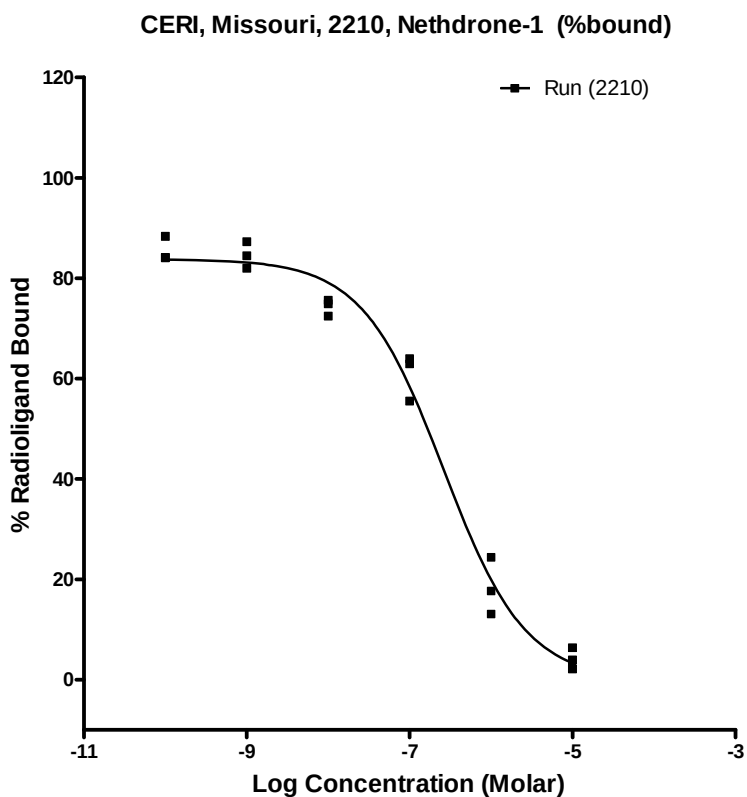
- **Missouri, Run 2206, Norethindrone-1**
- **Missouri, Run 2206, Norethindrone-2**
- **Missouri, Run 2210, Norethindrone-1**
- **Missouri, Run 2210, Norethindrone-2**
- **Missouri, Run 2211, Norethindrone-1**
- **Missouri, Run 2211, Norethindrone-1**
- **Missouri, Run 2301, Norethindrone-3**
- **Missouri, Run 2301, Norethindrone-4**
- **Missouri, Run 2302, Norethindrone-3**
- **Missouri, Run 2302, Norethindrone-4**
- **Missouri, Run 2305, Norethindrone-3**
- **Missouri, Run 2305, Norethindrone-4**



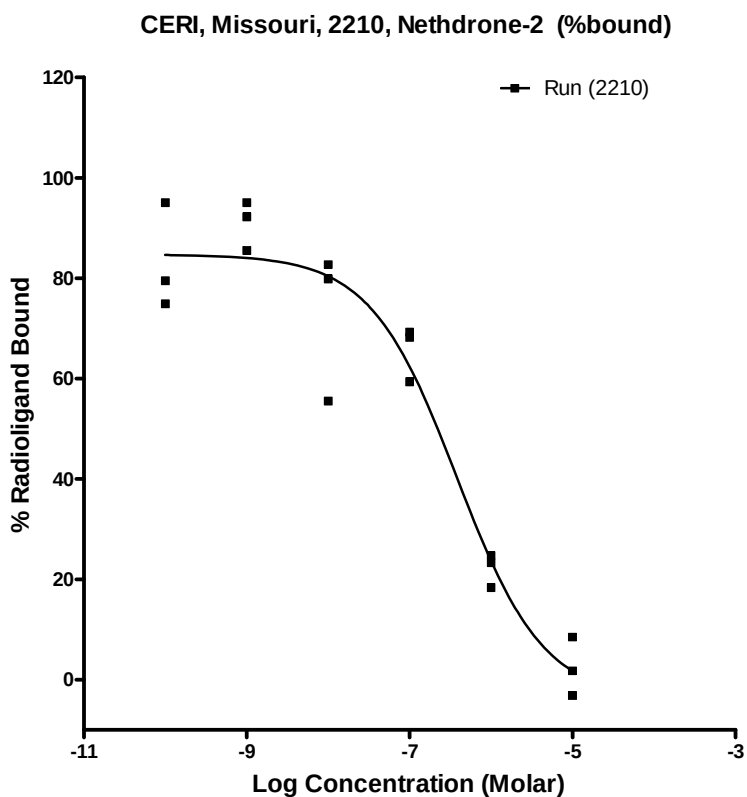
logIC50	
Best-fit values	
Bottom	8.487
Top	91.52
LogIC50	-6.060
HillSlope	-0.8810
Std. Error	
Bottom	6.158
Top	1.597
LogIC50	0.05549
HillSlope	0.1611
95% Confidence Intervals	
Bottom	-4.722 to 21.70
Top	88.09 to 94.95
LogIC50	-6.179 to -5.941
HillSlope	-1.226 to -0.5355
Goodness of Fit	
Degrees of Freedom	14
R square	0.9831
Sy.x	4.171
Number of points	
Analyzed	18



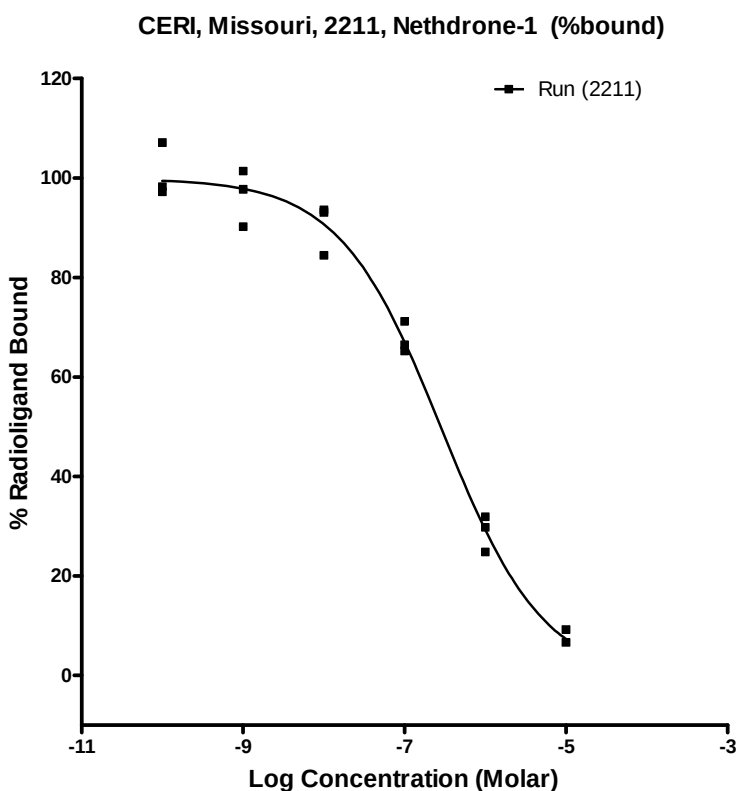
logIC50	
Best-fit values	
Bottom	3.310
Top	99.56
LogIC50	-5.988
HillSlope	-0.9189
Std. Error	
Bottom	8.983
Top	2.222
LogIC50	0.06742
HillSlope	0.2181
95% Confidence Intervals	
Bottom	-15.96 to 22.58
Top	94.79 to 104.3
LogIC50	-6.133 to -5.844
HillSlope	-1.387 to -0.4511
Goodness of Fit	
Degrees of Freedom	14
R square	0.9749
Sy.x	5.908
Number of points	
Analyzed	18



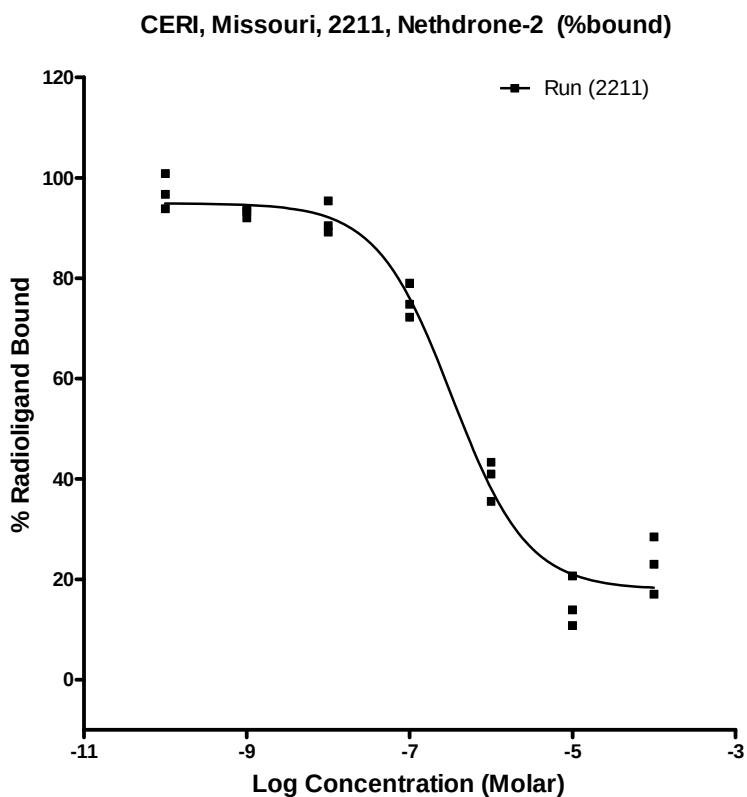
logIC50	
Best-fit values	
Bottom	-0.06005
Top	83.78
LogIC50	-6.778
HillSlope	-0.8677
Std. Error	
Bottom	3.865
Top	1.757
LogIC50	0.05689
HillSlope	0.1221
95% Confidence Intervals	
Bottom	-8.351 to 8.231
Top	80.02 to 87.55
LogIC50	-6.900 to -6.656
HillSlope	-1.130 to -0.6058
Goodness of Fit	
Degrees of Freedom	14
R square	0.9860
Sy.x	4.302
Number of points	
Analyzed	18



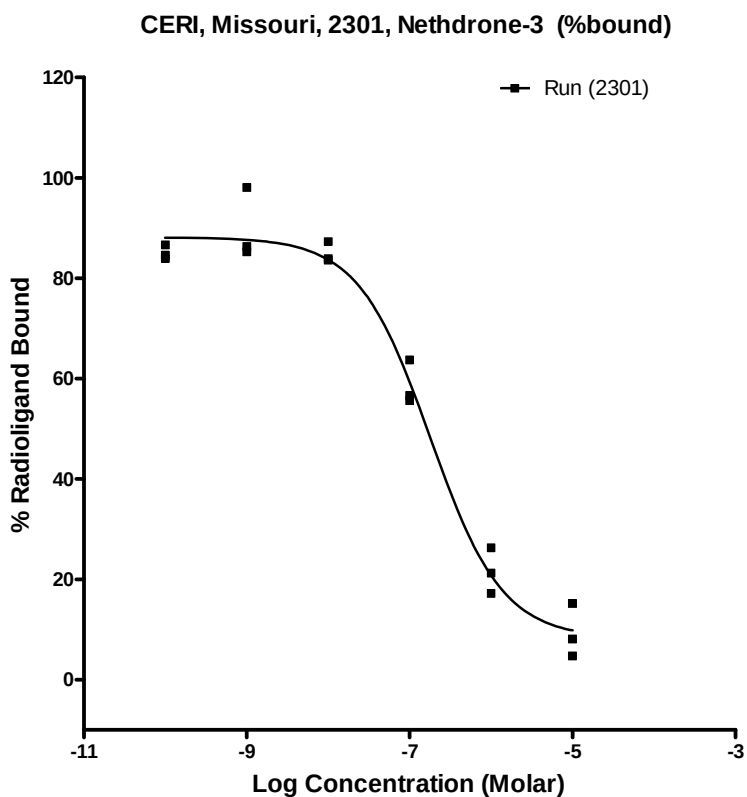
logIC50	
Best-fit values	
Bottom	-4.011
Top	84.72
LogIC50	-6.655
HillSlope	-0.8170
Std. Error	
Bottom	10.09
Top	3.861
LogIC50	0.1241
HillSlope	0.2486
95% Confidence Intervals	
Bottom	-25.65 to 17.63
Top	76.43 to 93.00
LogIC50	-6.921 to -6.389
HillSlope	-1.350 to -0.2837
Goodness of Fit	
Degrees of Freedom	14
R square	0.9380
Sy.x	9.393
Number of points	
Analyzed	18



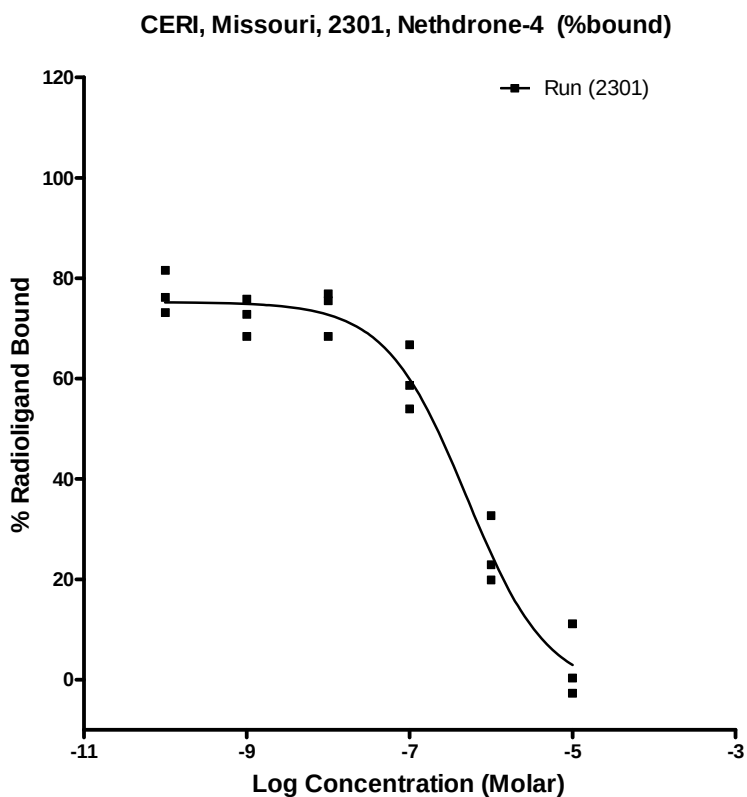
logIC50	
Best-fit values	
Bottom	-0.9157
Top	99.88
LogIC50	-6.552
HillSlope	-0.6844
Std. Error	
Bottom	5.278
Top	2.006
LogIC50	0.05294
HillSlope	0.09010
95% Confidence Intervals	
Bottom	-12.24 to 10.41
Top	95.58 to 104.2
LogIC50	-6.666 to -6.439
HillSlope	-0.8777 to -0.4911
Goodness of Fit	
Degrees of Freedom	14
R square	0.9894
Sy.x	4.152
Number of points	
Analyzed	18



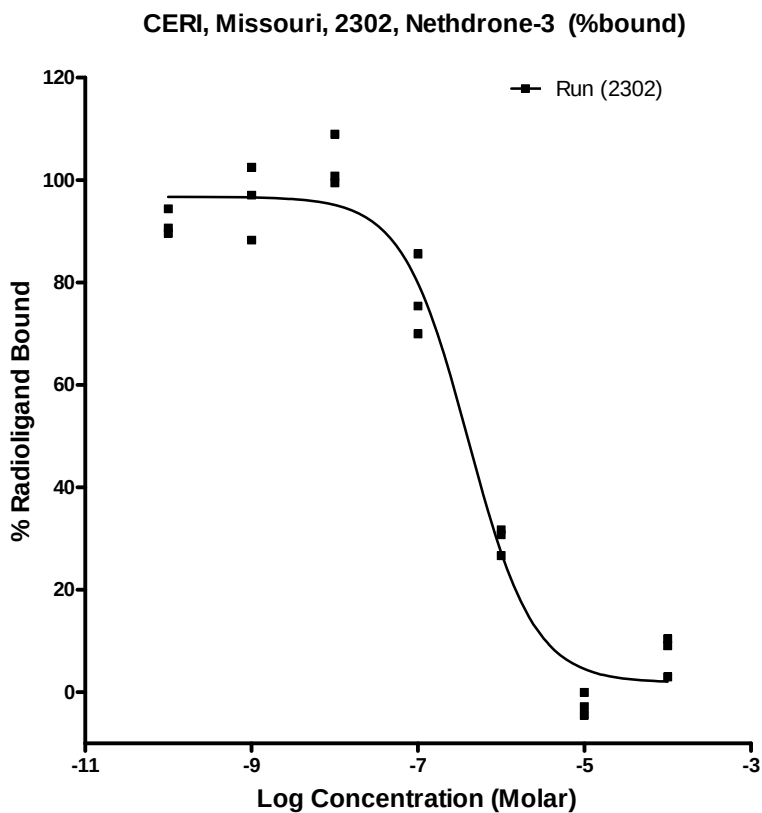
logIC50	
Best-fit values	
Bottom	17.96
Top	94.92
LogIC50	-6.323
HillSlope	-0.9388
Std. Error	
Bottom	2.510
Top	1.895
LogIC50	0.06881
HillSlope	0.1348
95% Confidence Intervals	
Bottom	12.66 to 23.25
Top	90.92 to 98.92
LogIC50	-6.469 to -6.178
HillSlope	-1.223 to -0.6544
Goodness of Fit	
Degrees of Freedom	17
R square	0.9815
Sy.x	4.970
Number of points	
Analyzed	21



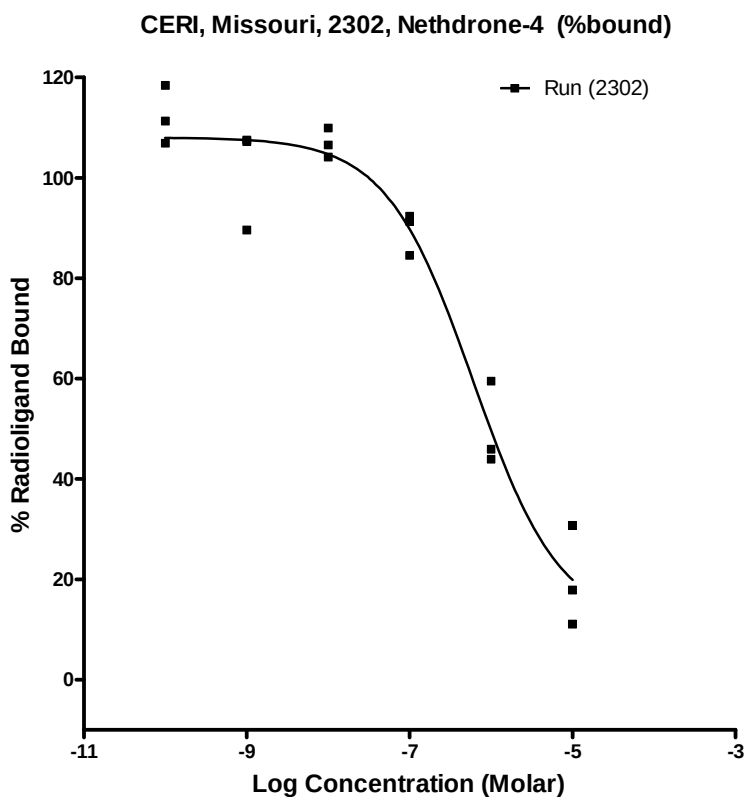
logIC50	
Best-fit values	
Bottom	8.298
Top	88.14
LogIC50	-6.785
HillSlope	-0.9817
Std. Error	
Bottom	3.454
Top	1.854
LogIC50	0.05843
HillSlope	0.1623
95% Confidence Intervals	
Bottom	0.8895 to 15.71
Top	84.16 to 92.11
LogIC50	-6.910 to -6.660
HillSlope	-1.330 to -0.6336
Goodness of Fit	
Degrees of Freedom	14
R square	0.9839
Sy.x	4.648
Number of points	
Analyzed	18



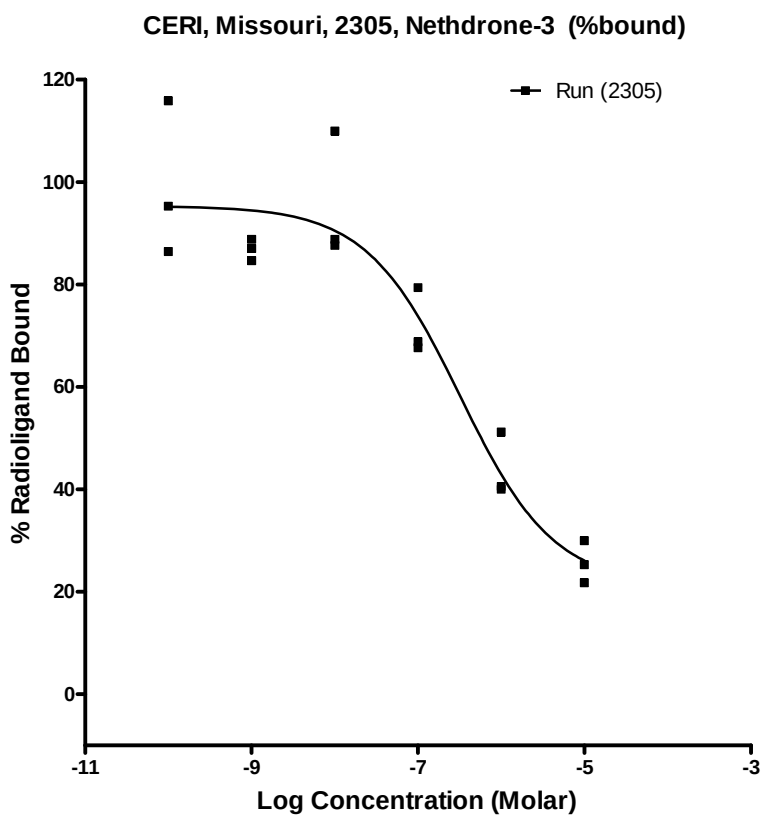
logIC50	
Best-fit values	
Bottom	-2.432
Top	75.22
LogIC50	-6.664
HillSlope	-0.8700
Std. Error	
Bottom	5.904
Top	2.130
LogIC50	0.08828
HillSlope	0.1770
95% Confidence Intervals	
Bottom	-15.10 to 10.23
Top	70.65 to 79.79
LogIC50	-6.853 to -6.474
HillSlope	-1.250 to -0.4903
Goodness of Fit	
Degrees of Freedom	14
R square	0.9713
Sy.x	5.445
Number of points	
Analyzed	18



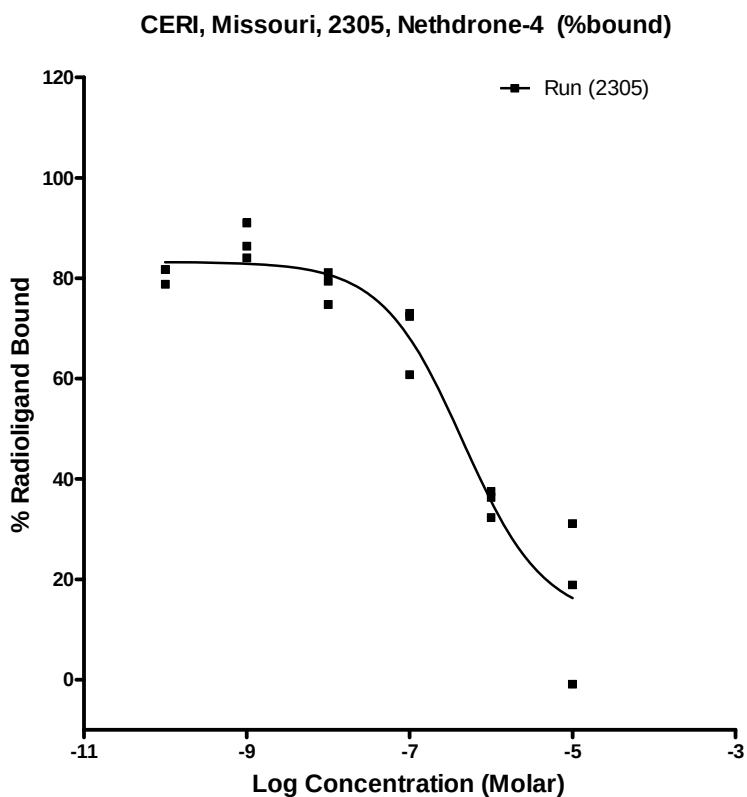
logIC50	
Best-fit values	
Bottom	1.817
Top	96.74
LogIC50	-6.408
HillSlope	-1.101
Std. Error	
Bottom	3.416
Top	2.608
LogIC50	0.07387
HillSlope	0.1839
95% Confidence Intervals	
Bottom	-5.391 to 9.025
Top	91.23 to 102.2
LogIC50	-6.564 to -6.252
HillSlope	-1.489 to -0.7132
Goodness of Fit	
Degrees of Freedom	17
R square	0.9753
Sy.x	7.256
Number of points	
Analyzed	21



logIC50	
Best-fit values	
Bottom	10.87
Top	108.0
LogIC50	-6.007
HillSlope	-0.8131
Std. Error	
Bottom	10.26
Top	3.137
LogIC50	0.1018
HillSlope	0.2086
95% Confidence Intervals	
Bottom	-11.15 to 32.89
Top	101.3 to 114.8
LogIC50	-6.226 to -5.789
HillSlope	-1.261 to -0.3658
Goodness of Fit	
Degrees of Freedom	14
R square	0.9598
Sy.x	7.797
Number of points	
Analyzed	18



logIC50	
Best-fit values	
Bottom	21.13
Top	95.32
LogIC50	-6.239
HillSlope	-0.7698
Std. Error	
Bottom	10.62
Top	4.158
LogIC50	0.1725
HillSlope	0.2943
95% Confidence Intervals	
Bottom	-1.649 to 43.91
Top	86.40 to 104.2
LogIC50	-6.609 to -5.869
HillSlope	-1.401 to -0.1385
Goodness of Fit	
Degrees of Freedom	14
R square	0.9098
Sy.x	9.590
Number of points	
Analyzed	18



logIC50	
Best-fit values	
Bottom	11.75
Top	83.23
LogIC50	-6.415
HillSlope	-0.8711
Std. Error	
Bottom	7.723
Top	2.921
LogIC50	0.1140
HillSlope	0.2560
95% Confidence Intervals	
Bottom	-4.817 to 28.31
Top	76.96 to 89.49
LogIC50	-6.660 to -6.171
HillSlope	-1.420 to -0.3220
Goodness of Fit	
Degrees of Freedom	14
R square	0.9402
Sy.x	7.436
Number of points	
Analyzed	18

Contract No: EP-W-11-063

Task Order No: 10

**ADDITIONAL STATISTICAL ANALYSES for
HUMAN RECOMBINANT ESTROGEN RECEPTOR (hrER)
VALIDATION**

- Task 2: Identify Chemical Runs Not Considered Acceptable by the
Submitting Laboratories, and Reclassify Chemicals if Necessary**
- Task 3: Re-Run Analysis for the Chemicals Runs Classified as
“Equivocal” Using the 10% Rule**

**U.S. Environmental Protection Agency
Endocrine Disruptor Screening Program
Washington, D.C.**

July 22, 2013

Prepared by

BATTELLE

505 King Avenue

Columbus, Ohio 43201

1. Introduction and Background

The EPA has conducted an interlaboratory validation study of two human recombinant estrogen receptor (hrER α) binding assays that utilize two hrER α proteins (Pan Vera-ER (PV-ER) and CERl-ER respectively). The two binding assay protocols are the Freyberger-Wilson Assay (FWA) protocol and the Chemicals Evaluation and Research Institute (CERl) protocol. The CERl protocol validation study was conducted at five laboratories: University of Missouri (Dr. Wade Welshons, Study Director), CeeTox (Dr. Jeff Pregenzer, Study Director), Lovelace Respiratory Research Institute (Dr. Jean Clare Seagrave, Study Director), CERl-Japan (Dr. Yumi Akahori, Study Director), and Bayer HealthCare, Germany (Dr. Alexius Freyberger, Study Director). The FWA protocol validation study was conducted at six laboratories: the same five laboratories as the CERl protocol study and the University of Konstanz (Dr. Daniel Dietrich, Study Director). Competitive binding assay tests on the estradiol (strong) standard, the norethynodrel (weak) standard, dibutylphthalate (negative), and 23 principal test chemicals were carried out at each of the laboratories.

In 2011 Battelle's Data Coordination Center (DCC) for EPA's Endocrine Disruptor Screening Program analyzed competitive binding data from the interlaboratory validation study. EPA would like to have additional statistical analyses carried out on the test results from these two assays, using the same datasets as in the 2011 analyses (Battelle, 2011).

In this report specified data from the interlaboratory validation study of the human recombinant estrogen receptor binding assay (hrER) are reanalyzed, accounting for decisions made by EPA concerning which data are appropriate to include in the analyses.

The additional analyses for the hrER assay study consist of two portions, each discussed in individual sections.

- Section 2.0: Identify test chemical specific runs not considered acceptable by the submitting laboratories and rerun the binding classification of the test chemicals after omitting these runs.
- Section 3.0: Rerun analyses for test chemical runs classified as equivocal in the December 2011 analysis omitting the chemical specific runs identified as being unacceptable in Section 2.0. Apply the 10% rule to omit higher concentration percent binding values that are 10% higher than the minimum average percent binding.

In the 2011 analysis all test runs that in the judgment of EPA had "acceptable" estradiol (E2) and norethynodrel (NE) positive control data were included in the binding classifications. In the current reanalyses, the runs that were not considered by the test laboratories to be acceptable runs for a specified test chemical but that were considered by EPA to have acceptable positive control data are identified and enumerated by protocol, laboratory, test chemical name,

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

and test run. These are test chemical runs that were included in the binding classification in the 2011 analysis but were not considered acceptable (on a chemical-by-chemical basis) by the laboratories, and they are listed in (Table 1 (for CERI) and Table 4 (for FWA)). The lists of unacceptable runs and questionable runs for each protocol, as identified through the review of the submitting laboratory reports, were sent to EPA for review (appendix A). EPA concurred that those unacceptable runs (test chemical specific) were unacceptable. They were omitted from subsequent classifications of chemicals into binding classes within laboratories, while the questionable runs were included. The binding classifications given in Tables 11 and 12 (CERI) and 13 and 14 (FWA) of the 2011 analysis report were revised to reflect the exclusion of these unacceptable runs. The updated tables are Tables 2 and 3 in Section 2.0 for the CERI protocol and Tables 5 and 6 for the FWA protocol. The detail binding classifications for individual laboratories, subtask, and test runs, that were given in the Appendix G for the 2011 analysis report were also updated and are presented in Appendix B, which reflects the omission of the unacceptable runs. Note that the recategorizations shown in Section 2.0 did not involve any refitting of response curves, just omission of the newly decided unacceptable runs.

Those (test chemical specific) runs that the laboratories thought were unacceptable and EPA concurred were omitted from analyses in Section 2 above, and also from analyses in Section 3. Those (test chemical specific) acceptable runs that were classified in 2011 as equivocal were subjected to the “10% rule” (i.e. omitting concentrations higher than that of the concentration corresponding to the minimum percent binding, at which the percent binding was at least 10 percentage points higher than the minimum percent binding). The 10% rule were implemented in the Excel data files, used in the 2011 analysis. Thus the determination of whether a chemical test run was affected by the 10% rule was made through the review of the Excel data files. Appendix C lists all the equivocal runs for both the CERI and FWA protocols and the 10% rule status, as well as the concentration levels omitted due to the 10% rule if affected by the 10% rule.

Four parameter logistic response curves were refitted with Prism for the equivocal runs that were modified by the 10% rule. As in the 2011 analysis, the least squares fitting option in Prism was used. These refitted runs were reclassified and the binding classifications given in Tables 11 and 12 (CERI) and 13 and 14 (FWA) of the 2011 analysis report were revised to reflect the omission of the unacceptable runs and the reclassification of the previously classified equivocal runs after applying the 10% rule. The updated tables (Tables 7 through 9) are included in Section 3.0.

It should be noted that two sets of reclassifications based on the acceptable (chemical specific runs) are presented – one prior to applying the 10% rule (Section 2.0) and the other after applying it (Section 3.0).

2. Identify Chemical Specific Runs not Considered Acceptable by the Submitting Laboratories and Reclassify Chemicals if Necessary

A. CERl Protocol

Table 1 displays the unacceptable chemical specific test runs specified by the test laboratories that were evaluated by EPA as acceptable for the positive controls. The full documentation elaborating on the characteristics of the unacceptable runs by the submitting laboratories is given in Appendix A.

Table C-1 in Appendix C of the 2011 Analysis report displays all the CERl protocol test runs, by test laboratory, subtask, EPA acceptance status based on the positive controls, and test chemical or control. All the test runs accepted by EPA were also accepted by the test laboratories except for the two (A/A) runs shown in Table 1.

Of the runs that were acceptable to EPA just two runs were reported as unacceptable by the test labs: CeeTox Subtask IV Run 3 and Lovelace, Subtask II, Run 1. These runs were omitted from the analyses for all the test chemicals within the runs. The questionable runs shown in Appendix A that were acceptable to EPA were included in the recategorizations.

The results of the recategorizations are shown in Table 2, averaged across subtasks, and in Table 3, separately within subtasks. The changed categorizations are highlighted in yellow and shown in italics. In agreement with Table 1 the changed categorizations are restricted to CeeTox and Lovelace laboratories. However the over (average) categorization across laboratories was still the same as those in the 2011 analysis, as the individual lab changes did not affect the inter-laboratory averaging agreement. After excluding the unacceptable runs by the submitting laboratories, in almost all cases, there are more agreements in the binding characteristics among the laboratories. The detailed binding classifications for individual laboratories, subtask, and test runs, that were given in the Appendix G for the 2011 analysis report were also updated and presented in Appendix B, after the omission of the unacceptable runs.

B. FWA Protocol

Table 4 displays the unacceptable chemical specific test runs specified by the test laboratories that were characterized as acceptable by EPA based on the positive controls. The full documentation elaborating on the characteristics of the all unacceptable FWA test runs is given in Appendix A. This also includes runs that EPA characterized as unacceptable.

Table C-2 in Appendix C of the 2011 Analysis report displays all the FWA protocol test runs, by test laboratory, subtask, EPA acceptance status based on the positive controls, and test

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

chemical or control. All the test runs accepted by EPA were also accepted by the test laboratories except for the 17 (A/A) runs shown in Table 4.

Of the runs that were acceptable to EPA 17 runs were reported as unacceptable by the test labs. These runs were omitted from the analyses either for all the test chemicals within the runs (4 runs) or for the specific test chemical(s) indicated in Table 4 (13 runs). The questionable runs shown in Appendix A that were acceptable to EPA were included in the recategorizations.

The results of the recategorizations are shown in Table 5, averaged across subtasks, and in Table 6, separately within subtasks. The changed categorizations are highlighted in yellow and shown in italics. In agreement with Table 4 the changed categorizations are restricted to Lovelace and Dietrich laboratories. However the over (average) categorization across laboratories was still the same as those in the 2011 analysis, as the individual lab changes did not affected the inter-laboratory averaging agreement. After excluding the unacceptable runs by the submitting laboratories, in almost all cases, there are more agreements in the binding characteristics among the laboratories. The detail binding classification for individual laboratories, subtask, and test runs, that were given in the Appendix G for the 2011 analysis report were also updated and presented in Appendix B, after the omission of the unacceptable runs.

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Table 1 Unacceptable Runs, CERI Protocol: Acceptable by EPA for Positive Control, and Unacceptable by Submitting Laboratories

Lab	Unacceptable Run(s)	Applicable to:		EPA Acceptance (E2/NE)
		Specific Chemical	Entire Run	
CeeTox CERI Competitive Binding Subtask IV	Run 3 9/7/2009		x	A/A
Lovelace CERI Competitive Binding Subtask II	Run 1 2/26/2009		x	A/A

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table 2. hrER α Competitive Binding Assay (CERi). Test Chemical Classifications Within and Across Laboratories.

Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
Atr	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
BaA	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Cort	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Cort_b	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
DBP	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
DBP-TC	Interactive	Interactive	Non-Interactive	Interactive	Non-Interactive	Equivocal	Equivocal
DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DHT	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
Dex	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
E ₂ -TC	Interactive	Equivocal	Equivocal	Interactive	Interactive	Interactive	Interactive
EE2	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
EE2_10xDilution		Interactive				Interactive	Interactive
EE2_b		Equivocal				Equivocal	Equivocal
ELactone	Interactive	Interactive	Equivocal	Interactive	Equivocal	Interactive	Interactive
Equol	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
Gen	Interactive	Equivocal	Interactive	Equivocal	Interactive	Interactive	Interactive
Gen_b	Interactive		Equivocal			Interactive	Equivocal
HPTE	Interactive		Interactive			Interactive	Interactive
Heptylphenol	Interactive	Equivocal	Equivocal	Interactive	Equivocal	Equivocal	Equivocal
Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Kepon	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Nethdrone	Interactive		Interactive			Interactive	Interactive
OTES	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Progesterone	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

- a. Suffix “-b” means the chemical was blinded and was tested in Subtasks 3 or 4.
- b. Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- c. 23 test chemicals and 3 standards (E₂, NE, and DBP)
- d. Simple averages were calculated across laboratories.
- e. A lab’s scores were weighted by the % of all runs at that lab: that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table 3. hrER α Competitive Binding Assay (CERi). Test Chemical Binding Classifications by Subtask Within and Across Laboratories.

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
st1	DBP	Non-Interactive	Non-Interactive	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive
st12	DBP		Equivocal				Equivocal	Equivocal
	DBP-TC		Interactive				Interactive	Interactive
	E ₂ -TC		Equivocal				Equivocal	Equivocal
	EE2_b		Equivocal				Equivocal	Equivocal
st2	ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Cort	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DBP	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	EE2	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
	EE2_10xDilution		Interactive				Interactive	Interactive
	Equol	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
	Gen	Interactive	Equivocal	Interactive	Equivocal	Interactive	Interactive	Interactive
	Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st3	Atr	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	BaA	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DBP	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
	DBP-TC	Interactive	Equivocal	Non-Interactive	Interactive	Non-Interactive	Equivocal	Equivocal
	DHT	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
	E ₂ -TC	Interactive	Equivocal	Equivocal	Interactive	Interactive	Interactive	Interactive
	ELactone	Interactive	Interactive	Equivocal	Interactive	Equivocal	Interactive	Interactive
	Heptylphenol	Interactive	Equivocal	Equivocal	Interactive	Equivocal	Equivocal	Equivocal
	Kepone	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	OTES	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	Progesterone	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st4	BPA	Interactive		Interactive			Interactive	Interactive
	Cort_b	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
	DBP	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
	Dex	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
	Gen_b	Interactive		Equivocal			Interactive	Equivocal
	HPTE	Interactive		Interactive			Interactive	Interactive
	Nethdrone	Interactive		Interactive			Interactive	Interactive
	OTES	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

- a. Suffix “-b” means the chemical are blinded and were tested in Subtasks 3 or 4.
- b. Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- c. 23 test chemicals and 3 standards (E₂, NE, and DBP)
- d. Simple averages were calculated across laboratories.
- e. A lab’s scores were weighted by the % of all runs at that lab that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Table 4 Unacceptable Runs, FWA Protocol: Acceptable by EPA for Positive Control, and Unacceptable by Submitting Laboratories

		Applicable to:			
Lab	Unacceptable Run(s)	Specific Chemical	Entire Run	EPA Acceptance (E2/NE)	Comments
CeeTox FWA Competitive Binding Subtask 1	20081123 (Run 1)		x	A/A	
CeeTox FWA Competitive Binding Subtask II	1/24/2009		x	A/A	
CeeTox FWA Competitive Binding Subtask II	2/2/2009		x	A/A	
CeeTox FWA Competitive Binding Subtask III	20090418 (Run 1)	Test chemical 4 (Zear)		A/A	
CeeTox FWA Competitive Binding Subtask IV	20090917	test chemical 23 (BPA-2)		A/A	
Lovelace FWA Competitive Binding Subtask II	1May09EtOH	estradiol, dbp		A/A	
Lovelace FWA Competitive Binding Subtask II	24-Feb-09	Equol highlighted as unacceptable		A/A	
Lovelace FWA Competitive Binding Subtask III	6/19/2009		x	A/A	
Dietrich FWA Competitive Binding Subtask 2	Assay #16	DBP		A/A	No data available, so excluded automatically
Dietrich FWA Competitive Binding Subtask 2	Assay #4 and #5	BP		A/A	

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

		Applicable to:			
Lab	Unacceptable Run(s)	Specific Chemical	Entire Run	EPA Acceptance (E2/NE)	Comments
Dietrich FWA Competitive Binding Subtask 2	Assay #4 and #5	NP		A/A	
Dietrich FWA Competitive Binding Subtask 2	Assay 5 and 6	DDT		A/A	
Dietrich FWA Competitive Binding Subtask 2	Assays 4 and 5mod	CS		A/A	
Dietrich FWA Competitive Binding Subtask 2	Assays 4 and 5	EE		A/A	
Dietrich FWA Competitive Binding Subtask 2	Assays 4 and 5	DES		A/A	
Dietrich FWA Competitive Binding Subtask 2	Assay 5	Equol		A/A	
Dietrich FWA Competitive Binding Subtask 3	Assay 16	DBP		A/A	No data available, so excluded automatically

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Table 5. hrER α Competitive Binding Assay (FWA). Test Chemical Classifications Within and Across Laboratories.

Chemical^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERl	Dietrich	Simple Average^d	Weighted by % of Runs with Acceptable E₂ and NE^e
Atr	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive
BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
BaA_DMSO	Equivocal		Non-Interactive		Non-Interactive		Non-Interactive	Non-Interactive
BaA_Ethol			Non-Interactive	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive
ButylPar	Interactive	Interactive	Interactive	Interactive	<i>Interactive</i>	<i>Interactive</i>	Interactive	Interactive
Cort	Non-Interactive	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Equivocal	Non-Interactive
Cort_b	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive	Non-Interactive
DBP	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
DBP-TC	Equivocal	Interactive	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal
DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DHT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Dex	Non-Interactive		Non-Interactive			Equivocal	Non-Interactive	Non-Interactive
E2-TC	Interactive	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
EE2	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
EE2_b		Interactive					Interactive	Interactive
ELactone	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Equol	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Gen	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Chemical^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERI	Dietrich	Simple Average^d	Weighted by % of Runs with Acceptable E₂ and NE^e
GenW			Interactive				Interactive	Interactive
Gen_b	Interactive		Interactive				Interactive	Interactive
HPTE	Interactive		Interactive			Interactive	Interactive	Interactive
Heptylphenol	Interactive	Interactive	Non- Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Kepone	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Nethdrone	Interactive		Interactive			Interactive	Interactive	Interactive
OTES	Non- Interactive		Non- Interactive	Non- Interactive	Non- Interactive	Non- Interactive	Non- Interactive	Non-Interactive
Progesterone	Equivocal	Interactive	Non- Interactive	Non- Interactive	Non- Interactive	Non- Interactive	Equivocal	Non-Interactive
Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive

- Suffix “-b” means the chemical was blinded and was tested in Subtasks 3 or 4.
- Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- 23 test chemicals and 3 standards (E₂, NE, and DBP)
- Simple averages were calculated across laboratories.
- A lab’s scores were weighted by the % of all runs at that lab: that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table 6. hrER α Competitive Binding Assay (FWA). Test Chemical Binding Classifications by Subtask Within and Across Laboratories.

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Dietrich	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
st1	DBP	Equivocal		Non-Interactive		Non-Interactive	Equivocal	Equivocal	Non-Interactive
st12	Atr		Non-Interactive					Non-Interactive	Non-Interactive
	DBP		Non-Interactive					Non-Interactive	Non-Interactive
	DBP-TC		Interactive					Interactive	Interactive
	E2-TC		Interactive					Interactive	Interactive
	EE2_b		Interactive					Interactive	Interactive
	Heptylphenol		Interactive					Interactive	Interactive
	Kepone		Interactive					Interactive	Interactive
	Progesterone		Interactive					Interactive	Interactive
st2	ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Cort	Non-Interactive	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Equivocal	Non-Interactive
	DBP	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	EE2	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Equol	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Gen	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	GenW			Interactive				Interactive	Interactive
	Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st3	Atr	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

SubTask	Chemical^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERI	Dietrich	Simple Average^d	Weighted by % of Runs with Acceptable E₂ and NE^e
	BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	BaA_DMSO	Equivocal		Non-Interactive		Non-Interactive		Non-Interactive	Non-Interactive
	BaA_Ethol			Non-Interactive	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive
	ButylPar						Interactive	Interactive	Interactive
	Cort_b						Non-Interactive	Non-Interactive	Non-Interactive
	DBP	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DBP-TC	Equivocal		Equivocal	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal
	DDT						Interactive	Interactive	Interactive
	DES						Interactive	Interactive	Interactive
	DHT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Dex						Equivocal	Equivocal	Equivocal
	E2-TC	Interactive	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
	EE2						Interactive	Interactive	Interactive
	ELactone	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Equol						Interactive	Interactive	Interactive
	Gen						Interactive	Interactive	Interactive
	HPTE						Interactive	Interactive	Interactive
	Heptylphenol	Interactive	Interactive	Non-Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Hexestrol						Interactive	Interactive	Interactive
	Kepone	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NPhenol						Interactive	Interactive	Interactive
	Nethdrone						Interactive	Interactive	Interactive
	OTES	Equivocal		Non-	Non-	Non-	Non-Interactive	Non-	Non-

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Dietrich	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
				Interactive	Interactive	Interactive		Interactive	Interactive
	Progesterone	Equivocal	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Non-Interactive
	Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st4	BPA	Interactive		Interactive				Interactive	Interactive
	Cort_b	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive
	DBP	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive
	Dex	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive
	Gen_b	Interactive		Interactive				Interactive	Interactive
	HPTE	Interactive		Interactive				Interactive	Interactive
	Nethdrone	Interactive		Interactive				Interactive	Interactive
	OTES	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive

- Suffix “-b” means the chemical was blinded and was tested in Subtasks 3 or 4.
- Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- 23 test chemicals and 3 standards (E₂, NE, and DBP)
- Simple averages were calculated across laboratories.
- A lab’s scores were weighted by the % of all runs at that lab that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

3. Rerun Analyses for Test Chemical Runs Classified as Equivocal, Using the 10% Rule

In this section attention is restricted to test runs that have the following characteristics:

- Run was judged by EPA to be acceptable based on the appearance of the E2 and NE positive control response curves
- Chemical specific run was characterized as acceptable by the test laboratory (Unacceptable runs are enumerated in Section 2 and were omitted from the analyses)
- Chemical specific run was characterized as equivocal, as defined in Section 6.0 of the December 2011 analysis report

The equivocal runs were subjected to the 10% rule as defined in Section 3.1 of the December 2011 analysis report (i.e. All replicates were excluded for which the replicate mean showed 10% more radiological binding than the lowest mean percent binding at lower concentrations). Those runs for which one or more concentrations were omitted by the 10% rule were refitted with Prism logistic response relations and the modified runs were recharacterized. Table C-1 pertains to the CERI protocol and Table C-2 pertains to the FWA protocol. Tables C-1 and C-2 show the runs that were affected by the 10% rule and the (log) concentration groups that were affected. The updated binding characterizations for the originally equivocal runs as well as the parameters of their revised (Prism) response curve fits are given. Note that, in the FWA protocol, some runs become non-testable because the (log₁₀) highest concentration is less than -6 due to 10% rule elimination and the average lowest responses are above 50%. Some runs that have no dose response curve fits due to the “U” shape response now have a fit and among them, some was reclassified as interactive.

The binding classification scores for the individual runs (both revised and unchanged) were averaged for individual subtask, across subtask for each laboratory, and across all laboratories using the same approaches defined in the 2011 analysis. The results of the recategorizations for the CERI protocol are shown in Table 7, averaged across subtasks, and in Table 8, separately within subtasks. The changed categorizations (from the 2011 analysis) are highlighted in yellow and shown in italics. The results of the recategorizations for the FWA protocol are shown in Table 9, averaged across subtasks, and in Table 10, separately within subtasks. The changed categorizations are highlighted in yellow and shown in italics. After reclassification, in almost all cases, there is greater agreement in the binding characteristics among the laboratories. It was also noticed that the binding classification across laboratories and subtasks are in agreement between using the simple average and using weighted averages except for the chemical “cort” in FWA protocol.

For the CERI protocol (Table 7), the “Equivocal” binding classification within a laboratory changed to “interactive” for NE-TC in Ceetox laboratory, for ButylPar, DDT and Hexestrol in Lovelace laboratory, for E2-TC and Gen_b in University of Missouri laboratory, and for Gen in Freyberger laboratory. These changes lead to greater agreement in binding

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

classification among the laboratories for these chemicals. It also changed the binding classification for Gen_b across laboratories based on the weighted averages from “equivocal” into “interactive”. In general, individual run classification could change from “equivocal” to “interactive” after omitting the U-shaped data values, or stayed as “equivocal”. In some cases, they could change to “nontestable” due to the elimination of some highest concentration level and they could not reach the -6 log₁₀ concentration level (Appendix C-1), which is the reason that the binding classification for some chemicals in some subtasks and laboratories changed from “equivocal” to “non-interactive” (Table 8),

For the FWA protocol (Table 9), the “Equivocal” binding classification within a laboratory changed to “interactive” for ButylPar and EE2 in the Dietrich laboratory, to “non-interactive”, for Progesterone in Ceetox laboratory. These changes lead to greater agreement in binding classification among the laboratories for these chemicals. They also changed the binding classification for Progesterone across laboratories based on the simple averages from “equivocal” into “non-interactive”. In general, individual run classification could change from “equivocal” to “interactive” after omitting the U-shaped data values, or stayed as “equivocal”. In some cases, they could change to “nontestable” due to the elimination of some highest concentration level and they could not reached the -6 log₁₀ concentration level (Appendix C-2), which is the reason that the binding classification for some chemicals in some subtasks and laboratories changed from “equivocal to “non-interactive” from “non-interactive” to “equivocal” (Table 10),

The revised run characterizations in Tables 7, 8 (CERl) and 9, 10 (FWA) can be compared with the run characterizations in Tables 3, 4 (CERl) and 5, 6 (FWA) to evaluate the changes resulting from use of the 10% rule with the equivocal test runs.

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table 7. hrER α Competitive Binding Assay (CERi). Test Chemical Classifications Within and Across Laboratories. Formerly Equivocal Test Runs Subjected to 10% Rule Prior to Response Curve Fits.

Chemical ^{a,b,c}	Ceetox	Lovelace	Missouri	Freyberger	Japan CERi	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
Atr	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
BaA	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Cort	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Cort_b	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
DBP	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
DBP-TC	Interactive	Interactive	Non-Interactive	Interactive	Non-Interactive	Equivocal	Equivocal
DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DHT	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
Dex	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
E ₂ -TC	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
EE2	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
EE2_10xDilution		Interactive				Interactive	Interactive
EE2_b		Equivocal				Equivocal	Equivocal
ELactone	Interactive	Interactive	Equivocal	Interactive	Equivocal	Interactive	Interactive
Equol	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
Gen	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
Gen_b	Interactive		Interactive			Interactive	Interactive
HPTE	Interactive		Interactive			Interactive	Interactive
Heptylphenol	Interactive	Equivocal	Equivocal	Interactive	Equivocal	Equivocal	Equivocal
Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Kepon	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Nethdrone	Interactive		Interactive			Interactive	Interactive

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Chemical^{a,b,c}	Ceetox	Lovelace	Missouri	Freyberger	Japan CERi	Simple Average^d	Weighted by % of Runs with Acceptable E₂ and NE^e
OTES	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Progesterone	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive

- a. Suffix “-b” means the chemical was blinded and was tested in Subtasks 3 or 4.
- b. Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- c. 23 test chemicals and 3 standards (E₂, NE, and DBP)
- d. Simple averages were calculated across laboratories.
- e. A lab’s scores were weighted by the % of all runs at that lab: that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Appendix H (Revisions, Tables B-5 CER1 and B-6 FW)

Table 8. hrER α Competitive Binding Assay (CER1). Test Chemical Binding Classifications by Subtask Within and Across Laboratories. Formerly Equivocal Test Runs Subjected to 10% Rule Prior to Response Curve Fits.

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CER1	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
st1	DBP	Non-Interactive	Non-Interactive	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive
st12	DBP		Equivocal				Equivocal	Equivocal
	DBP-TC		Interactive				Interactive	Interactive
	E ₂ -TC		Equivocal				Equivocal	Equivocal
	EE2_b		Equivocal				Equivocal	Equivocal
st2	ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Cort	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DBP	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	EE2	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
	EE2_10xDilution		Interactive				Interactive	Interactive
	Equol	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
	Gen	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
	Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st3	Atr	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	BaA	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DBP	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive

Appendix H (Revisions, Tables B-5 CER1 and B-6 FW)

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CER1	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
	DBP-TC	Interactive	Equivocal	Non-Interactive	Interactive	Non-Interactive	Equivocal	Equivocal
	DHT	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
	E ₂ -TC	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive	Interactive
	ELactone	Interactive	Interactive	Equivocal	Interactive	Equivocal	Interactive	Interactive
	Heptylphenol	Interactive	Equivocal	Equivocal	Interactive	Equivocal	Equivocal	Equivocal
	Kepone	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	OTES	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	Progesterone	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st4	BPA	Interactive		Interactive			Interactive	Interactive
	Cort_b	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
	DBP	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
	Dex	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive
	Gen_b	Interactive		Interactive			Interactive	Interactive
	HPTE	Interactive		Interactive			Interactive	Interactive
	Nethdrone	Interactive		Interactive			Interactive	Interactive
	OTES	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive

a. Suffix “-b” means the chemical are blinded and were tested in Subtasks 3 or 4.

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

- b. Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- c. 23 test chemicals and 3 standards (E₂, NE, and DBP)
- d. Simple averages were calculated across laboratories.
- e. A lab’s scores were weighted by the % of all runs at that lab that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table 9. hrER α Competitive Binding Assay (FWA). Test Chemical Classifications Within and Across Laboratories. Formerly Equivocal Test Runs Subjected to 10% Rule Prior to Response Curve Fits.

Chemical^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Dietrich	Simple Average^d	Weighted by % of Runs with Acceptable E₂ and NE^e
Atr	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive
BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
BaA_DMSO	Equivocal		Non-Interactive		Non-Interactive		Non-Interactive	Non-Interactive
BaA_Ethol			Non-Interactive	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive
ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Cort	Non-Interactive	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Equivocal	Non-Interactive
Cort_b	Non-Interactive		Non-Interactive			Non-Interactive	Non-Interactive	Non-Interactive
DBP	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
DBP-TC	Equivocal	Interactive	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal
DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
DHT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Dex	Non-Interactive		Non-Interactive			Equivocal	Non-Interactive	Non-Interactive
E2-TC	Interactive	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
EE2	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
EE2_b		Interactive					Interactive	Interactive
ELactone	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Equol	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Gen	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
GenW			Interactive				Interactive	Interactive
Gen_b	Interactive		Interactive				Interactive	Interactive
HPTE	Interactive		Interactive			Interactive	Interactive	Interactive
Heptylphenol	Interactive	Interactive	Non-Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Kepone	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Nethdrone	Interactive		Interactive			Interactive	Interactive	Interactive
OTES	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Progesterone	Non-Interactive	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive

- Suffix “-b” means the chemical was blinded and was tested in Subtasks 3 or 4.
- Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- 23 test chemicals and 3 standards (E₂, NE, and DBP)
- Simple averages were calculated across laboratories.
- A lab’s scores were weighted by the % of all runs at that lab: that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table 10. hrER α Competitive Binding Assay (FWA). Test Chemical Binding Classifications by Subtask Within and Across Laboratories. Formerly Equivocal Test Runs Subjected to 10% Rule Prior to Response Curve Fits.

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Dietrich	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
st1	DBP	Equivocal		Non-Interactive		Non-Interactive	Equivocal	Equivocal	Non-Interactive
st12	Atr		Non-Interactive					Non-Interactive	Non-Interactive
	DBP		Non-Interactive					Non-Interactive	Non-Interactive
	DBP-TC		Interactive					Interactive	Interactive
	E2-TC		Interactive					Interactive	Interactive
	EE2_b		Interactive					Interactive	Interactive
	Heptylphenol		Interactive					Interactive	Interactive
	Kepone		Interactive					Interactive	Interactive
	Progesterone		Interactive					Interactive	Interactive
st2	ButylPar	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Cort	Non-Interactive	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Equivocal	Non-Interactive
	DBP	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DDT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	DES	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	EE2	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Equol	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Gen	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	GenW			Interactive				Interactive	Interactive
	Hexestrol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NPhenol	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st3	Atr	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive	Equivocal	Non-Interactive	Non-Interactive
	BPA	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	BaA_DMSO	Equivocal		Non-Interactive		Non-Interactive		Non-Interactive	Non-Interactive
	BaA_Ethol			Non-Interactive	Non-Interactive		Non-Interactive	Non-Interactive	Non-Interactive
	ButylPar						Interactive	Interactive	Interactive
	Cort_b						Non-Interactive	Non-Interactive	Non-Interactive

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERi	Dietrich	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
	DBP	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	DBP-TC	Equivocal		Equivocal	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal
	DDT						Interactive	Interactive	Interactive
	DES						Interactive	Interactive	Interactive
	DHT	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Dex						Equivocal	Equivocal	Equivocal
	E2-TC	Interactive	Interactive	Interactive	Equivocal	Interactive	Interactive	Interactive	Interactive
	EE2						Interactive	Interactive	Interactive
	ELactone	Interactive		Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Equol						Interactive	Interactive	Interactive
	Gen						Interactive	Interactive	Interactive
	HPTE						Interactive	Interactive	Interactive
	Heptylphenol	Interactive	Interactive	Non-Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Hexestrol						Interactive	Interactive	Interactive
	Kepone	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NE-TC	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	NPhenol						Interactive	Interactive	Interactive
	Nethdrone						Interactive	Interactive	Interactive
	OTES	Equivocal		Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	Progesterone	Non-Interactive	Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive	Non-Interactive
	Tamox	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
	Zear	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive	Interactive
st4	BPA	Interactive		Interactive				Interactive	Interactive
	Cort_b	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive
	DBP	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive
	Dex	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive
	Gen_b	Interactive		Interactive				Interactive	Interactive
	HPTE	Interactive		Interactive				Interactive	Interactive
	Nethdrone	Interactive		Interactive				Interactive	Interactive

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

SubTask	Chemical ^{a,b,c}	CeeTox	Lovelace	Missouri	Freyberger	Japan CERl	Dietrich	Simple Average ^d	Weighted by % of Runs with Acceptable E ₂ and NE ^e
	OTES	Non-Interactive		Non-Interactive				Non-Interactive	Non-Interactive

- a. Suffix “-b” means the chemical are blinded and were tested in Subtasks 3 or 4.
- b. Suffix “-TC” means the standard chemical (E₂, NE or DBP) was tested as if it were a test chemical.
- c. 23 test chemicals and 3 standards (E₂, NE, and DBP)
- d. Simple averages were calculated across laboratories.
- e. A lab’s scores were weighted by the % of all runs at that lab that were acceptable for both E₂ and NE compared to the total number of runs reported by that lab, before averaging across labs. The weights used were those that were used in the 2011 analysis, prior to deletions of any runs.

Reference

Battelle (2011), Draft Report -**Analysis Of Competitive Binding Data From Six Laboratories And Two Protocols For The Human Recombinant ER (Hrera) Binding Assay Validation Effort, Data Handling and Statistical Analysis Method and Results, Detailed Report**, Prepared For EPA Under CONTRACT NUMBER EP-W-06-032 WORK ASSIGNMENT 5-2, TECHNICAL DIRECTIVE 24. December 2011.

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Appendix A. Task 2. Questionable and Unacceptable Runs Characterized by the Test Laboratories

Appendix A-1. CERI Protocol

Appendix A-2. FWA Protocol

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Appendix A-1. CERI Protocol

Laboratory	Unacceptable Run(s)	Applicable to:		EPA Acceptance (E2/NE)	Reason	Source		Comments
		Specific Chemical	Entire Run			Report	pdf Page	
CeeTox CERI Competitive Binding Subtask IV	Run 3 9/7/2009		x	A/A	Run three displayed higher % bound values than runs one and two at low test chemical concentrations and with chemicals that did not produce much displacement. This was likely due to low values in the buffer control samples that are used to calculate Mean Specific Binding.	Ceetox CERI Competitive Binding STIV Report Final	9	
Lovelace CERI Competitive Binding Subtask I	Run 1 12/31/2008	estradiol		U/U	Excessive estradiol competition (IC50 < -10)	Lovelace CERI Competition Report Final	23	
Lovelace CERI Competitive Binding Subtask II	Run 1 2/26/2009		x	A/A	Provided only extremely erratic data	Lovelace CERI Competition Report Final	24	
Lovelace CERI Competitive Binding Subtask II	Run 3 3/3/2009		x	U/U	Produced a fairly strong, though nonsigmoid, apparent competition from DBP	Lovelace CERI Competition Report Final	24	
Lovelace CERI Competitive	Run 5 3/11/2009		x	U/U	Apparently due to low total binding values, all of the low dose competitors produced	Lovelace CERI Competition	24	

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Binding Subtask II					"binding" greatly exceeding "100%."	Report Final		
Lovelace CERI Competitive Binding Subtask II	Run 6 3/17/2009		x	U/A	Produced a non-sigmoidal estradiol competition curve not achieving 100% at the lowest concentrations.	Lovelace CERI Competition Report Final	24	
Lovelace CERI Competitive Binding Subtask III	Run 6 6/12/2009		x	A*/A* (footnote a)	Did not produce an acceptable low plateau for estradiol. Also included one of the triplicates for code 10 that showed low binding for all concentrations, suggesting that perhaps the receptor was omitted from these wells. The entire assay was deemed unacceptable and is not reported in detail.	Lovelace CERI Competition Report Final	24	The runs are identified as A/A with "*". In December 2011 analysis, they are classified as (U/U) and therefore not be included in the analysis.
Missouri CERI Competitive Binding Subtask I	4004		x	Not in the dataset	"Presumably unacceptable run, no data files." Error, hrER α omitted.	Missouri CERI Competitive Binding Report Final	40	Assignment of "unacceptable" obtained from table of lab results attached to a letter from EDSR to USEPA HQ dated April 11, 2011.
Missouri CERI Competitive Binding Subtask I	5004		x	Not in the dataset	"Presumably unacceptable run, no data files." No additional information.	Missouri CERI Competitive Binding Report Final	-	Assignment of "unacceptable" obtained from table of lab results attached to a letter from EDSR to USEPA HQ dated April 11, 2011.
Freyberger CERI					No lab reports available.			
Japan CERI					No lab reports available.			

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Appendix A-2. FWA Protocol

General notes:

- 1) The parentheses before the runs are acceptability by the EPA based on the E2 and NE.
e.g., (CeeTox) Subtask 1 (A/A) Assay Run 1: 20081122 – the entire run seems unacceptable. (A/A) acceptable for both E2 and NE.
- 2) (NA) – not applicable if the run is not in the December analysis (data).
e.g., (Missouri) (NA) (1001 – entire run is bad (not in the data set).
- 3) Only the run identified as (A/A) but not acceptable by the lab need to be excluded from the December analysis.
- 4) Chemicals may be identified by the lab using chemical codes and they are decoded using the decoding sheet in Appendix A
e.g. Subtask 3 (A/A) Assay 20090418 (Run 1) – Test chemical 4 (Zear) was excluded from regression (unacceptable). Test chemical 4 is decoded as Zear.

CeeTox FWA

Unacceptable runs:

EPA acceptance (E2/NE)

Subtask 1 (A/A) Assay Run 1: 20081122 – the entire run seems unacceptable.

Subtask 2 (A/A) 1/24/09, (U/U) 1/28/09, and (A/A) 2/2/09 – all unacceptable

Subtask 3 (A/A) Assay 20090418 (Run 1) – Test chemical 4 (Zear) was excluded from regression (unacceptable).

Subtask 3 (A/U) Assay 20090426 (Run 2) – test chemical 4 (Zear) was excluded from regression.

Subtask 4 (A/U) assay 20090914 – test chemical 23 (BPA-2) excluded from regression analysis

Subtask 4 (A/A) assay 20090917 – test chemical 23 (BPA-2) excluded from regression analysis

Questionable runs:

Subtask 3 (A/A) Assay 20090418 (Run 1): chemicals 7(BPA), 11(ELactone) and 13 (OTES)

Subtask 3 (A/U) Assay 20090426 (Run 2): Norethynodrel, chemical 11 (ELactone)

Details and Sources

Appendix H (Revisions, Tables B-5 CER1 and B-6 FW)

Ceetox FWA Competitive Binding STI Report Final.pdf

Subtask 1 Assay Run 1: 20081122 – the entire run seems unacceptable.

Documentation:

Page 6/18:

- A total of four competition experiments were conducted on 11/22/08, 11/23/08, 11/24/08, and 12/18/08. The amount of hrER α protein used in the competition binding experiments was 0.5 nanoMolar. Data is reported for run 2, 3 and 4. Data is not used for the report from run #1 as the counts in the Total Binding samples were lower than expected.

Page 10/18:

- Assay Run 1: 20081122 (rejected due to low Total Binding values which artificially increased the sample % radioligand bound values)
- Assay No. 20081122 No procedural difficulties noted, however, counts in the Total Binding samples were lower than expected.

Pages 13/18-16/18:

Their prism results are missing Run 1 from ALL chemical results...

Ceetox FWA Competitive Binding STII Report Final.pdf

Subtask 2 – 1/24/09, 1/28/09, and 2/2/09 – all unacceptable

Documentation – Page 6/33 – “Runs 1, 2, and 3 (1/24/09, 1/28/09, 2/02/09) were not included in reported nonlinear fit values due to inconsistent and variable values which were likely a result of Dextran coated charcoal (DCC) clumping or related problems.”

Page 13/33 – pipette tip clogging with DCC...

Ceetox FWA Competitive Binding STIII Report Final.pdf

Subtask 3 Assay 20090418 (Run 1) – Test chemical 4 was excluded from regression (unacceptable). Question: chemicals 7, 11 and 13

Documentation – Page 13/43 under “**Notes on any abnormalities that occurred during any step of the assay:** “Adjustments made to test chemicals 7, 11, and 13. Test chemical 4 was excluded from regression.

Subtask 3 Assay 20090426 (Run 2) – test chemical 4 was excluded from regression. Question: Norethynodrel, chemical 11

Appendix H (Revisions, Tables B-5 CER1 and B-6 FW)

Documentation

- Page 13/43 under “**Notes on any abnormalities that occurred during any step of the assay:**” test chemical 2 had outliers. Norethynodrel had a dilution error in which some half-log dilutions were skipped in the higher concentration range. Chemical 4 had an inconsistently low point (at -9M) which was excluded from the regression analysis. Also, the concentrations were slightly too high for the potency of the chemical to achieve a complete sigmoidal binding curve.
- Page 16/43 “Test chemical 11 – the curve shifted up or down depending on the position that it was in the plate. This phenomenon could possibly be due to temperature differences at some point during the process or some other condition. Rotating the plate in the scintillation counter did not change the pattern on the plate which eliminated a scintillation reading problem.”

Ceetox FWA Competitive Binding STIV Report Final.pdf

Subtask 4 assay 20090914 – test chemical 23 excluded from regression analysis

Documentation – page 15/42 “Test chemical 23 – had inconsistently high triplicate point measurements at -3M (possible pipetting error) which was excluded from the regression analysis.”

Subtask 4 assay 20090917 – test chemical 23 excluded from regression analysis

Documentation – page 15/42 “Test chemical 23 – had inconsistently high triplicate point measurements at -8M (possible pipetting error) which was excluded from the regression analysis.”

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Lovelace FWA

Unacceptable runs

Subtask 1:

(U/U) 09Dec08: DBP run is bad

Subtask 2:

(A/A) 1May09EtOH; unacceptable estradiol, dbp result poor

(U/U) 13 May 09 – BP highlighted as unacceptable.

(U/A) 6 Feb 09 – DES highlighted as unacceptable. 4NP highlighted as unacceptable. DDT highlighted as unacceptable.

(A/A) 24 Feb 09 – Eq highlighted as unacceptable.

(A/U) 16 April 09 – Gen highlighted as unacceptable.

(U/U) 24 April 09 – mH (Hexestrol) highlighted as unacceptable

(U/U) 28 April 09 – 17a EE (EE2) highlighted as unacceptable

Subtask 3:

(U/U) 3/20/2009 – Entire run is unacceptable.

(A/A) 6/19/2009 - Entire run is unacceptable.

(U/U) 10 March 09 – codes 3 (DBP), 6 (DHT), 7(BPA), 11(ELactone), and 13 (OTES) – highlighted as unacceptable.

(U/U) 31 March 09 – Code 9 (Kepone) – highlighted as unacceptable.

(U/U) 23 June 09 – Code 8 (Heptylphenol) – highlighted as unacceptable.

Questionable runs.

Subtask 1 (U/U) 16Dec08: Marginally Acceptable, steep slope for estradiol

Subtask 1 (A/-) 19Dec08: Marginally Acceptable, NE is not run

Also the following from Jim's notes.

Name	Type	Modified
hrER (FWA) comp_09Dec08, v39.xls	Microsoft Office Excel 97-2003 ...	1/27/2009 11:50 AM
hrER (FWA) comp_09Dec08.xls	Microsoft Office Excel 97-2003 ...	12/22/2008 3:34 PM
hrER (FWA) compST2 DMSO_30-Jan-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:58 PM
hrER (FWA) compST2 EtOH 12-Feb-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:58 PM
hrER (FWA) compST2 EtOH_01-May1-09 corrected.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:00 PM
hrER (FWA) compST2 EtOH_10-April-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:00 PM
hrER (FWA) compST2 EtOH_21-April-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:01 PM

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

hrER (FWA) compST3-coded EtOH 19-Jun-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:01 PM
hrER (FWA) compST3-coded EtOH 20-Mar-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:01 PM
hrER-FWA-comp_09Dec08.pzf	GraphPad Prism 5 Project	12/22/2008 3:34 PM
hrER-FWA-compST2_01-May-09 Corrected.pzf	GraphPad Prism 5 Project	3/22/2011 6:02 PM
hrER-FWA-compST2_10-April-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:02 PM
hrER-FWA-compST2_12-Feb-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:03 PM
hrER-FWA-compST2_21-April-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:03 PM
hrER-FWA-compST2_30-Jan-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:03 PM
hrER-FWA-compST3 Coded_19-Jun-09.pzf	GraphPad Prism 5 Project	3/22/2011 6:04 PM
hrER-FWA-compST3 Coded_20-Mar-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:04 PM
hrER-FWA-rawdata-comp-coded_19-Jun-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:52 PM
hrER-FWA-rawdata-comp-coded_20-Mar-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_01-May-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_10-April-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_12-Feb-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_21-April-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_30-Jan-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM

Details and Sources

Lovelace FWA competition report final signed.pdf – Notes:

Subtask 1: One run had unacceptable DBP (I assume 12/9/2008), one run had unacceptable estradiol (not sure which run...12/16/2008???)...runs were repeated in a fourth run (12/19/2008???)...with low total binding...considered not acceptable...and an acceptable 5th run was done (1/27/2009???)

Documentation: Page 21/51 - Because one run with DBP and one run with estradiol were not acceptable, these analyses of estradiol and DBP were repeated in the fourth run. The total binding in the fourth run was slightly below the target of 15-25% (10.8%). However, after consultation with the sponsor it was determined that all three test articles together constitute an acceptable run (so run 4, although the data for the two test articles used were consistent with the previous runs, was considered not acceptable), and a fifth run was performed with all three, which met the acceptability criteria.

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Subtask 1/Documentation: Page 23/51 All three substances (Estradiol, NEth, and DBP) were run on Dec. 3, Dec. 13, and Dec. 16, 2008. An additional run on Dec 19, 2008, included only estradiol and DBP, on the basis that the results from the first three runs were acceptable for NorEth. The final run, on 27 Jan 2009, included all three test articles, to complete a set of three fully acceptable runs.

Subtask 1 – Dec 16, 2008 – the run was considered unacceptable, and the run on 19 Dec 08 did not include NEth and was thus not accepted.

Documentation: Page 30/51 - The run on Dec 16 was considered unacceptable due to an excessively steep competition slope and is excluded from further analysis (not included in the average). Because the estradiol curve for this run was considered unsuitable for further analysis, the RBA values were calculated based on the average estradiol Ki from the other runs, rather than the same run. The run on 19 Dec 08 did not include NEth, due to misunderstanding that “acceptable runs” for this task required acceptable data for all three test articles, and although the data for Estradiol and DBP are clean, the run was not accepted for this reason.

Subtask 2: 1 May 09 – unacceptable estradiol... (the “Battelle_Summary tables April 2011.pdf” file says “5/1/2009 Unacceptable run, dbp result poor”).

Documentation:

Page 6/51 - For subtask 2, three runs of each test article (TA), performed with acceptable criteria for all three control articles (**estradiol: positive**; norethynodrel: weak positive; and Dibutylphthalate, negative), and all using ethanol as the solvent for the test articles, are reported in detail. One additional run (1 May 09) resulted in an unacceptable profile for the **positive control**, and is not reported in detail.

Subtask 2: Notes for all other unacceptable runs – the bisphenol, 4-nitrophenol, and DDT were weak positives; diethylstilbestrol, equol, 17 α ethynyl estradiol, mesohexestranol, and genistein were positive, and cortisol was negative in this assay.

Documentation:

Page 6/51 - In addition, several test articles resulted in unacceptable runs and are not reported in detail. The results indicated that the bisphenol, 4-nitrophenol, and DDT were weak positives; diethylstilbestrol, equol, 17 α ethynyl estradiol, mesohexestranol, and genistein were positive, and cortisol was negative in this assay.

Subtask 2: 13 May 09 – BP highlighted as unacceptable.

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

6 Feb 09 – DES highlighted as unacceptable. 4NP highlighted as unacceptable. DDT highlighted as unacceptable.

24 Feb 09 – Eq highlighted as unacceptable.

16 April 09 – Gen highlighted as unacceptable.

24 April 09 – mH highlighted as unacceptable

28 April 09 – 17a EE highlighted as unacceptable

Documentation: Table 3 (Page 35/51-36/51)

Subtask 3: 3/20/2009 – Entire run is unacceptable.

6/19/2009 - Entire run is unacceptable.

Documentation:

Page 6/51 For subtask 3, two runs were designated as unacceptable: the first due to lack of convergence of the curve fit for the estradiol, and the second, due to low binding at the lowest concentration of most of the test articles.

Page 22/51 Two runs were not considered acceptable: the curve fit for the estradiol competition run on 20 March 2009 did not converge, due to very low binding in the lowest concentration of the competitor and a large amount of scatter in the other points, and the run on 19 Jun 09, in which although the control substances appeared to compete normally, nearly all of the other TAs demonstrated very low binding at their lowest concentrations.

Page 46/51 – footnote, “In addition, two runs were deemed unacceptable based on systematic issues: the estradiol run on 20 March 2009 did not converge due to low binding at the lowest concentration of the inhibitor and large amounts of scatter. For the run on 19 June 09, although all of the controls appeared to compete normally, all of the coded test articles demonstrated extremely low binding at the lowest concentrations. nd: not done on this date”

Subtask 3: 10 March 09 – codes 3, 6, 7, 11, and 13 – highlighted as unacceptable.

31 March 09 – Code 9 – highlighted as unacceptable.

23 June 09 – Code 8 – highlighted as unacceptable.

Documentation – page 43/51-46/51 - Table 4.

From Jim's Notes

Appendix H (Revisions, Tables B-5 CER1 and B-6 FW)

C:\Documents and Settings\jkariya\JK's Documents\endocrine disruptors\ER, AR binding\hrER\FW assay\data\U.S\Lovellace\reports\final, 4-5-2011\Lovellace.7z\Lovellace\FWA st1-3\FWA St3 Data Appendices E1-E3\Unacceptable runs Appendices F1-F3

Name	Type	Modified
hrER (FWA) comp_09Dec08, v39.xls	Microsoft Office Excel 97-2003 ...	1/27/2009 11:50 AM
hrER (FWA) comp_09Dec08.xls	Microsoft Office Excel 97-2003 ...	12/22/2008 3:34 PM
hrER (FWA) compST2 DMSO_30-Jan-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:58 PM
hrER (FWA) compST2 EtOH 12-Feb-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:58 PM
hrER (FWA) compST2 EtOH_01-May1-09 corrected.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:00 PM
hrER (FWA) compST2 EtOH_10-April-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:00 PM
hrER (FWA) compST2 EtOH_21-April-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:01 PM
hrER (FWA) compST3-coded EtOH 19-Jun-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:01 PM
hrER (FWA) compST3-coded EtOH 20-Mar-09 ERR.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 6:01 PM
hrER-FWA-comp_09Dec08.pzf	GraphPad Prism 5 Project	12/22/2008 3:34 PM
hrER-FWA-compST2_01-May-09 Corrected.pzf	GraphPad Prism 5 Project	3/22/2011 6:02 PM
hrER-FWA-compST2_10-April-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:02 PM
hrER-FWA-compST2_12-Feb-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:03 PM
hrER-FWA-compST2_21-April-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:03 PM
hrER-FWA-compST2_30-Jan-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:03 PM
hrER-FWA-compST3 Coded_19-Jun-09.pzf	GraphPad Prism 5 Project	3/22/2011 6:04 PM
hrER-FWA-compST3 Coded_20-Mar-09 ERR.pzf	GraphPad Prism 5 Project	3/22/2011 6:04 PM
hrER-FWA-rawdata-comp-coded_19-Jun-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:52 PM
hrER-FWA-rawdata-comp-coded_20-Mar-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_01-May1-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_10-April-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_12-Feb-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_21-April-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM
hrER-FWA-rawdata-compST2_30-Jan-09.xls	Microsoft Office Excel 97-2003 ...	3/22/2011 5:53 PM

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

University of Missouri

NA – no applicable

(NA) 1001 – entire run is bad (not in the data set)

(NA) 1001 through 1011 – entire runs are bad (not in the dataset)

(NA) 1014 and 1015 – training assays (not in the dataset)

(NA) 1018 and 1019 – unacceptable (not in the dataset)

(U/A) 3005 2-24-09 Submitted, but not accepted (subtask 1)

(NA) 3007 2-25-09 Submitted, but not accepted (subtask 1)

(U/A) 3008 2-25-09 Submitted, but not accepted (subtask 1)

Details and sources

Missouri FWA Competitive Binding Report Final.pdf – Notes:

1001 – entire run is bad?

Documentation – Page 13/21 - 1001 - Assay performed in TPP (Techno Plastic Products of Switzerland) 96-well plates tissue culture plates, all pipeting by hand, radioactivity counted in individual vials by standard LSC; results compared to prior training assays by a routine lab whole cell uptake assay. Time and temperature were not fully controlled in this first, preliminary, assay, and some vials may have been mixed up as well.

1001 through 1011 – entire runs are bad?

Documentation – Page 14/21, “Between the assays above and the assays following below, we discovered a misinterpretation of the protocol in the preparation of the serial dilutions of the nonradioactive estradiol from the highest concentration stocks, which led to higher ethanol concentrations in the assay than permitted, as high as 25% in the highest concentration points and a control.”

1014 and 1015 – training assays

Documentation – Page 15/21, “1014, 1015 - Training assays”

1018 and 1019 – unacceptable?

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Documentation – Page 15/21, “1018, 1019 - Assays performed with 1/2 and 1/4 standard amount of hrER α , results did not justify any changes to prior protocols.”

The following are from Jim’s note:

pp 33-34/60:

ST I, Standards

3001 2-16-09

3002 2-19-09

3003 2-19-09

3004 2-19-09

3005 2-24-09 Submitted, but not accepted

3006 2-24-09

3007 2-25-09 Submitted, but not accepted

3008 2-25-09 Submitted, but not accepted

7001 4-21-09

7002 4-24-09

7003 4-26-09

7004 4-26-09

7005 5-4-09 Submitted

7006 5-5-09 Submitted

7007 5-6-09 Submitted

ST II, Known Test Chemicals

9001 6-5-09

9002 6-6-09

9003 6-9-09 Submitted

9004 6-12-09 Submitted

9005 6-12-09 Submitted

9006 6-12-09

9007 6-15-09 Submitted

9008 6-15-09

ST IIIa, Unknown Test Chemicals TC 1-7

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

8101 6-29-09 Submitted
8102 6-29-09 Submitted
8103 7-3-09 Lost - the counting plates were thrown from the rocker
8104 7-3-09 Lost - the counting plates were thrown from the rocker
8105 7-7-09
8106 7-7-09
8107 7-9-09 Submitted
8108 7-9-09 Submitted
FWA Competition ST I-III, 32 / 35

ST IIIb, TC 8, 9, 11
8001 5-18-09 Submitted
8002 5-18-09 Submitted
8004 5-21-09 Submitted

ST IIIc, TC 12-14
8003 5-21-09 Submitted
8004 5-21-09 Submitted
8005 5-21-09 Submitted

ST IIId, TC 10
8201 7-22-09 Submitted
8202 7-22-09 Submitted
8203 7-22-09 Submitted

ST III(other), TC 8-14
8006 5-28-09
8007 5-29-09

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Dietrich FWA

(A/A) Task 2 Assay #16 – DBP results not ok
(A/A) Task 2 Assay #4 and #5 – BP results not okay
(A/A) Task 2 Assay #4 and #5 – NP results not okay
(A/A) Task Assay 5 and 6 – DDT results not okay
(A/A) Task 2 Assays 4 and 5mod – CS results not okay
(A/A) Task 2 Assays 4 and 5 – EE results not okay
(A/A) Task 2 Assays 4 and 5 – DES results not okay
(A/A) Task 2 Assay 5 – EQ results not okay
(A/A) Task 3 Assay 16 – DBP error
(A/U) Task 3 Assay 10 – Substance G (DHT) not okay
(A/U) Task 3 Assay 10 – Substance H (E2-TC) not okay
(A/U) Task 3 Assay 10 – Substance K (NPhenol) not okay
(A/U) Task 3 Assay 10 – Substance L (Gen) not okay
(A/U) Task 3 Assay 10 – Substance M (NE-TC) results not okay
(A/U) Task 3 Assay 10 – Substance N (Atr) results not okay
(A/U) Task 3 Assay 10 – Substance O (Nethdrone-1) results not okay
(A/U) Task 3 Assay 10 – Substance U (Tamox) results not okay
(A/U) Task 3 Assay 10 and 12 – Substance V (Kepone) results not okay
(A/U) Task 3 Assay 10 and 12 – Substance W (DDT) results not okay
(A/U) Task 3 Assay 10 – Substance Y (EE2) results not okay
(A/U) Task 3 Assay 10 – Substance Z (Dex-1) results not okay

Details and Sources

ECVAM FINAL REPORT_AHH100808(Dietrich).pdf

Task and assay unknown...Documentation: Page 43/144 “In January 2008, it was intended to start a new assay series beginning with the recently introduced protein assay. However, this assay resulted in unacceptable values, emphasizing the previously discussed problems with the assay in general.”

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Task and assay unknown...Documentation: Page 10/144 “After several assays problems occurred (low specific binding values) and the ER was considered to be the most critical parameter and therefore considered most likely to be degraded. A reason for this could not be found at this time point. After communicating the problems to Invitrogen, the company replaced the ER vial with a new vial of the same lot.”

Task 2 Assay #16 – DBP results not ok
Documentation – Page 68/144, Table 31

Task 2 Assay #4 and #5 – BP results not okay
Documentation – Page 71/144 to 72/144, Table 34

Task 2 Assay #4 and #5 – NP results not okay
Documentation – Page 74/144, Table 35

Task Assay 5 and 6 – DDT results not okay
Documentation – Page 74/144, Table 36

Task 2 Assays 4 and 5mod – CS results not okay
Documentation – Page 77/144 Table 37

Task 2 Assays 4 and 5 – EE results not okay
Documentation – Page 77/144 Table 38

Task 2 Assays 4 and 5 – DES results not okay
Documentation – Page 80/144 Table 39

Task 2 Assay 5 – EQ results not okay
Documentation – Page 80/144 Table 40

Task 3 Assay 16 – DBP error
Documentation – Page 92/144 Table 51

Task 3 Assay 10 – Substance G not okay

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Documentation – Page 103/144 Table 58

Task 3 Assay 10 – Substance H not okay
Documentation – Page 104/144 Table 59

Task 3 Assay 10 – Substance K not okay
Documentation – Page 106/144 Table 62

Task 3 Assay 10 – Substance L not okay
Documentation – Page 107/144 Table 63

Task 3 Assay 10 – Substance M results not okay
Documentation – Page 108/144 Table 64

Task 3 Assay 10 – Substance N results not okay
Documentation – Page 110/144 Table 65

Task 3 Assay 10 – Substance O results not okay
Documentation – Page 111/144 Table 66

Task 3 Assay 10 – Substance U results not okay
Documentation – Page 117/144 Table 72

Task 3 Assay 10 and 12 – Substance V results not okay
Documentation – Page 120 of 144, Table 73

Task 3 Assay 10 and 12 – Substance W results not okay
Documentation – Page 120/144 Table 74

Task 3 Assay 10 – Substance Y results not okay
Documentation – Page 123/144 Table 76

Task 3 Assay 10 – Substance Z results not okay

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Documentation – Page 125/144 Table 77

Appendix B. Binding Classification of Chemicals for Individual Laboratories and Test Runs

The following tables show the classification of each run for each chemical at each lab (Tables B-5 and B-6), using only the runs for which both the estradiol and norethynodrel standards were judged by EPA to be acceptable, and for which the chemicals were judged by the submitting laboratories to be acceptable, and which met the criteria for testability (see text in 2011 report for the criteria).

Tables B-1 and B-3 combine individual results on the same chemical within a lab and within a subtask.

Tables B-2 and B-4 combine individual results on the same chemical within a lab but across subtasks. The tables differ (potentially) from Tables B-1 and B-3 only for those chemicals that were tested in more than one subtask.

Table B-1 CERI, Binding Classification of Chemicals, by Subtask and Laboratory

Table B-2 CERI, Binding Classification of Chemicals, by Laboratory

Table B-3 FWA, Binding Classification of Chemicals, by Subtask and Laboratory

Table B-4 FWA, Binding Classification of Chemicals, by Laboratory

Table B-5 CERI, Binding Classification of Chemicals, by Individual Run

Table B-6 FWA, Binding Classification of Chemicals, by Individual Run

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table B-1. CERi, Test Chemical Binding Classifications by Subtask within Each Laboratory, Based on Acceptable and Testable Runs. Binder (Avg=>1.5), Equivocal (0.5<=Avg <1.5), Non-Binder (Avg<0.5).

Protocol	Chemical	SubTask	Laboratory	Average vote	Binding Status	# of Testable runs	# of Non-Testable runs
CERi	Atr	st3	Ceetox	0	Non-Binder	1	0
CERi	Atr	st3	Freyberger	0	Non-Binder	3	0
CERi	Atr	st3	JapanCERi	0	Non-Binder	3	0
CERi	Atr	st3	Lovelace	1	Equivocal	2	0
CERi	Atr	st3	Missouri	0	Non-Binder	6	0
CERi	BPA	st3	Ceetox	2	Binder	1	0
CERi	BPA	st3	Freyberger	2	Binder	2	0
CERi	BPA	st3	JapanCERi	2	Binder	4	0
CERi	BPA	st3	Lovelace	2	Binder	3	0
CERi	BPA	st3	Missouri	2	Binder	3	0
CERi	BPA	st4	Ceetox	2	Binder	6	0
CERi	BPA	st4	Missouri	1.666667	Binder	6	0
CERi	BaA	st3	Ceetox	0	Non-Binder	1	0
CERi	BaA	st3	Freyberger	0	Non-Binder	3	0
CERi	BaA	st3	JapanCERi	0	Non-Binder	3	0
CERi	BaA	st3	Lovelace	0.666667	Equivocal	3	0
CERi	BaA	st3	Missouri	0	Non-Binder	6	0
CERi	ButylPar	st2	Ceetox	2	Binder	2	0
CERi	ButylPar	st2	Freyberger	2	Binder	3	0
CERi	ButylPar	st2	JapanCERi	2	Binder	3	0
CERi	ButylPar	st2	Lovelace	2	Binder	2	0
CERi	ButylPar	st2	Missouri	2	Binder	3	0
CERi	Cort	st2	Ceetox	0	Non-Binder	2	0
CERi	Cort	st2	Freyberger	0.333333	Non-Binder	3	0
CERi	Cort	st2	JapanCERi	0	Non-Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Cort	st2	Lovelace	1	Equivocal	3	0
CERI	Cort	st2	Missouri	0.333333	Non-Binder	3	0
CERI	Cort_b	st4	Ceetox	0.333333	Non-Binder	6	0
CERI	Cort_b	st4	Missouri	0	Non-Binder	6	0
CERI	DBP	st1	Ceetox	0	Non-Binder	3	0
CERI	DBP	st1	JapanCERI	0	Non-Binder	3	0
CERI	DBP	st1	Lovelace	0	Non-Binder	2	0
CERI	DBP	st1	Missouri	0	Non-Binder	10	0
CERI	DBP	st12	Lovelace	0.8	Equivocal	5	0
CERI	DBP	st2	Ceetox	0	Non-Binder	2	0
CERI	DBP	st2	Freyberger	0	Non-Binder	6	0
CERI	DBP	st2	JapanCERI	0	Non-Binder	3	0
CERI	DBP	st2	Lovelace	0.666667	Equivocal	6	0
CERI	DBP	st2	Missouri	0.333333	Non-Binder	3	0
CERI	DBP	st3	Ceetox	0	Non-Binder	1	0
CERI	DBP	st3	Freyberger	0.25	Non-Binder	8	0
CERI	DBP	st3	JapanCERI	0	Non-Binder	10	0
CERI	DBP	st3	Lovelace	0.428571	Non-Binder	7	0
CERI	DBP	st3	Missouri	0	Non-Binder	9	0
CERI	DBP	st4	Ceetox	0	Non-Binder	3	0
CERI	DBP	st4	Missouri	0.166667	Non-Binder	6	0
CERI	DBP-TC	st12	Lovelace	1.8	Binder	5	0
CERI	DBP-TC	st3	Ceetox	2	Binder	1	0
CERI	DBP-TC	st3	Freyberger	2	Binder	3	0
CERI	DBP-TC	st3	JapanCERI	0	Non-Binder	3	0
CERI	DBP-TC	st3	Lovelace	1.333333	Equivocal	3	0
CERI	DBP-TC	st3	Missouri	0	Non-Binder	3	0
CERI	DDT	st2	Ceetox	2	Binder	2	0
CERI	DDT	st2	Freyberger	2	Binder	3	0
CERI	DDT	st2	JapanCERI	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	DDT	st2	Lovelace	2	Binder	2	0
CERI	DDT	st2	Missouri	2	Binder	3	0
CERI	DES	st2	Ceetox	2	Binder	2	0
CERI	DES	st2	Freyberger	2	Binder	3	0
CERI	DES	st2	JapanCERI	2	Binder	3	0
CERI	DES	st2	Lovelace	2	Binder	4	0
CERI	DES	st2	Missouri	2	Binder	3	0
CERI	DHT	st3	Ceetox	2	Binder	1	0
CERI	DHT	st3	Freyberger	2	Binder	3	0
CERI	DHT	st3	JapanCERI	2	Binder	3	0
CERI	DHT	st3	Lovelace	1.666667	Binder	3	0
CERI	DHT	st3	Missouri	1.333333	Equivocal	3	0
CERI	Dex	st4	Ceetox	0.333333	Non-Binder	6	0
CERI	Dex	st4	Missouri	0.333333	Non-Binder	6	0
CERI	E2-TC	st12	Lovelace	1.4	Equivocal	5	0
CERI	E2-TC	st3	Ceetox	2	Binder	1	0
CERI	E2-TC	st3	Freyberger	1.5	Binder	2	0
CERI	E2-TC	st3	JapanCERI	2	Binder	3	0
CERI	E2-TC	st3	Lovelace	1.25	Equivocal	4	0
CERI	E2-TC	st3	Missouri	1.333333	Equivocal	3	0
CERI	EE2	st2	Ceetox	1.5	Binder	2	0
CERI	EE2	st2	Freyberger	2	Binder	3	0
CERI	EE2	st2	JapanCERI	2	Binder	3	0
CERI	EE2	st2	Lovelace	1	Equivocal	4	0
CERI	EE2	st2	Missouri	2	Binder	3	0
CERI	EE2_10xDilution	st2	Lovelace	2	Binder	1	0
CERI	EE2_b	st12	Lovelace	1.2	Equivocal	5	0
CERI	ELactone	st3	Ceetox	2	Binder	1	0
CERI	ELactone	st3	Freyberger	2	Binder	2	0
CERI	ELactone	st3	JapanCERI	1	Equivocal	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	ELactone	st3	Lovelace	1.5	Binder	2	0
CERI	ELactone	st3	Missouri	0.666667	Equivocal	6	0
CERI	Equol	st2	Ceetox	2	Binder	2	0
CERI	Equol	st2	Freyberger	2	Binder	3	0
CERI	Equol	st2	JapanCERI	2	Binder	3	0
CERI	Equol	st2	Lovelace	1.333333	Equivocal	3	0
CERI	Equol	st2	Missouri	2	Binder	3	0
CERI	Gen	st2	Ceetox	2	Binder	2	0
CERI	Gen	st2	Freyberger	1	Equivocal	3	0
CERI	Gen	st2	JapanCERI	1.666667	Binder	3	0
CERI	Gen	st2	Lovelace	1	Equivocal	1	0
CERI	Gen	st2	Missouri	1.666667	Binder	3	0
CERI	Gen_b	st4	Ceetox	1.833333	Binder	6	0
CERI	Gen_b	st4	Missouri	1.166667	Equivocal	6	0
CERI	HPTE	st4	Ceetox	2	Binder	6	0
CERI	HPTE	st4	Missouri	1.833333	Binder	6	0
CERI	Heptylphenol	st3	Ceetox	2	Binder	1	0
CERI	Heptylphenol	st3	Freyberger	2	Binder	3	0
CERI	Heptylphenol	st3	JapanCERI	1	Equivocal	4	0
CERI	Heptylphenol	st3	Lovelace	1	Equivocal	3	0
CERI	Heptylphenol	st3	Missouri	1	Equivocal	6	0
CERI	Hexestrol	st2	Ceetox	2	Binder	2	0
CERI	Hexestrol	st2	Freyberger	2	Binder	3	0
CERI	Hexestrol	st2	JapanCERI	2	Binder	3	0
CERI	Hexestrol	st2	Lovelace	1.5	Binder	4	0
CERI	Hexestrol	st2	Missouri	2	Binder	3	0
CERI	Kepone	st3	Ceetox	2	Binder	1	0
CERI	Kepone	st3	Freyberger	2	Binder	2	0
CERI	Kepone	st3	JapanCERI	2	Binder	3	0
CERI	Kepone	st3	Lovelace	2	Binder	2	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Kepone	st3	Missouri	2	Binder	6	0
CERI	NE-TC	st3	Ceetox	2	Binder	1	0
CERI	NE-TC	st3	Freyberger	2	Binder	3	0
CERI	NE-TC	st3	JapanCERI	2	Binder	3	0
CERI	NE-TC	st3	Lovelace	2	Binder	3	0
CERI	NE-TC	st3	Missouri	2	Binder	3	0
CERI	NPhenol	st2	Ceetox	1.5	Binder	2	0
CERI	NPhenol	st2	Freyberger	2	Binder	3	0
CERI	NPhenol	st2	JapanCERI	2	Binder	3	0
CERI	NPhenol	st2	Lovelace	2	Binder	1	0
CERI	NPhenol	st2	Missouri	2	Binder	3	0
CERI	Nethdrone	st4	Ceetox	2	Binder	12	0
CERI	Nethdrone	st4	Missouri	1.75	Binder	12	0
CERI	OTES	st3	Ceetox	0	Non-Binder	1	0
CERI	OTES	st3	Freyberger	0	Non-Binder	3	0
CERI	OTES	st3	JapanCERI	0	Non-Binder	3	0
CERI	OTES	st3	Lovelace	0	Non-Binder	2	0
CERI	OTES	st3	Missouri	0	Non-Binder	6	0
CERI	OTES	st4	Ceetox	0	Non-Binder	6	0
CERI	OTES	st4	Missouri	0.333333	Non-Binder	6	0
CERI	Progesterone	st3	Ceetox	0	Non-Binder	1	0
CERI	Progesterone	st3	Freyberger	0	Non-Binder	3	0
CERI	Progesterone	st3	JapanCERI	0	Non-Binder	4	0
CERI	Progesterone	st3	Lovelace	0	Non-Binder	2	0
CERI	Progesterone	st3	Missouri	0	Non-Binder	6	0
CERI	Tamox	st3	Ceetox	2	Binder	1	0
CERI	Tamox	st3	Freyberger	1.5	Binder	2	0
CERI	Tamox	st3	JapanCERI	2	Binder	3	0
CERI	Tamox	st3	Lovelace	2	Binder	3	0
CERI	Tamox	st3	Missouri	1.666667	Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Zear	st3	Ceetox	2	Binder	1	0
CERI	Zear	st3	Freyberger	2	Binder	3	0
CERI	Zear	st3	JapanCERI	2	Binder	3	0
CERI	Zear	st3	Lovelace	2	Binder	3	0
CERI	Zear	st3	Missouri	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Table B-2. CERI, Test Chemical Binding Classifications within Each Laboratory, Based on Acceptable and Testable Runs. Binder (Avg=>1.5), Equivocal (0.5<=Avg<1.5), Non-Binder (Avg<0.5).

Protocol	Laboratory	Chemical	Average vote	Binding Status	# of Testable runs	# of Non-Testable runs
CERI	Ceetox	Atr	0	Non-Binder	1	0
CERI	Ceetox	BPA	2	Binder	7	0
CERI	Ceetox	BaA	0	Non-Binder	1	0
CERI	Ceetox	ButylPar	2	Binder	2	0
CERI	Ceetox	Cort	0	Non-Binder	2	0
CERI	Ceetox	Cort_b	0.333333	Non-Binder	6	0
CERI	Ceetox	DBP	0	Non-Binder	9	0
CERI	Ceetox	DBP-TC	2	Binder	1	0
CERI	Ceetox	DDT	2	Binder	2	0
CERI	Ceetox	DES	2	Binder	2	0
CERI	Ceetox	DHT	2	Binder	1	0
CERI	Ceetox	Dex	0.333333	Non-Binder	6	0
CERI	Ceetox	E2-TC	2	Binder	1	0
CERI	Ceetox	EE2	1.5	Binder	2	0
CERI	Ceetox	ELactone	2	Binder	1	0
CERI	Ceetox	Equol	2	Binder	2	0
CERI	Ceetox	Gen	2	Binder	2	0
CERI	Ceetox	Gen_b	1.833333	Binder	6	0
CERI	Ceetox	HPTE	2	Binder	6	0
CERI	Ceetox	Heptylphenol	2	Binder	1	0
CERI	Ceetox	Hexestrol	2	Binder	2	0
CERI	Ceetox	Kepone	2	Binder	1	0
CERI	Ceetox	NE-TC	2	Binder	1	0
CERI	Ceetox	NPhenol	1.5	Binder	2	0
CERI	Ceetox	Nethdrone	2	Binder	12	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Ceetox	OTES	0	Non-Binder	7	0
CERI	Ceetox	Progesterone	0	Non-Binder	1	0
CERI	Ceetox	Tamox	2	Binder	1	0
CERI	Ceetox	Zear	2	Binder	1	0
CERI	Freyberger	Atr	0	Non-Binder	3	0
CERI	Freyberger	BPA	2	Binder	2	0
CERI	Freyberger	BaA	0	Non-Binder	3	0
CERI	Freyberger	ButylPar	2	Binder	3	0
CERI	Freyberger	Cort	0.333333	Non-Binder	3	0
CERI	Freyberger	DBP	0.142857	Non-Binder	14	0
CERI	Freyberger	DBP-TC	2	Binder	3	0
CERI	Freyberger	DDT	2	Binder	3	0
CERI	Freyberger	DES	2	Binder	3	0
CERI	Freyberger	DHT	2	Binder	3	0
CERI	Freyberger	E2-TC	1.5	Binder	2	0
CERI	Freyberger	EE2	2	Binder	3	0
CERI	Freyberger	ELactone	2	Binder	2	0
CERI	Freyberger	Equol	2	Binder	3	0
CERI	Freyberger	Gen	1	Equivocal	3	0
CERI	Freyberger	Heptylphenol	2	Binder	3	0
CERI	Freyberger	Hexestrol	2	Binder	3	0
CERI	Freyberger	Kepone	2	Binder	2	0
CERI	Freyberger	NE-TC	2	Binder	3	0
CERI	Freyberger	NPhenol	2	Binder	3	0
CERI	Freyberger	OTES	0	Non-Binder	3	0
CERI	Freyberger	Progesterone	0	Non-Binder	3	0
CERI	Freyberger	Tamox	1.5	Binder	2	0
CERI	Freyberger	Zear	2	Binder	3	0
CERI	JapanCERI	Atr	0	Non-Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	JapanCERI	BPA	2	Binder	4	0
CERI	JapanCERI	BaA	0	Non-Binder	3	0
CERI	JapanCERI	ButylPar	2	Binder	3	0
CERI	JapanCERI	Cort	0	Non-Binder	3	0
CERI	JapanCERI	DBP	0	Non-Binder	16	0
CERI	JapanCERI	DBP-TC	0	Non-Binder	3	0
CERI	JapanCERI	DDT	2	Binder	3	0
CERI	JapanCERI	DES	2	Binder	3	0
CERI	JapanCERI	DHT	2	Binder	3	0
CERI	JapanCERI	E2-TC	2	Binder	3	0
CERI	JapanCERI	EE2	2	Binder	3	0
CERI	JapanCERI	ELactone	1	Equivocal	3	0
CERI	JapanCERI	Equol	2	Binder	3	0
CERI	JapanCERI	Gen	1.666667	Binder	3	0
CERI	JapanCERI	Heptylphenol	1	Equivocal	4	0
CERI	JapanCERI	Hexestrol	2	Binder	3	0
CERI	JapanCERI	Kepone	2	Binder	3	0
CERI	JapanCERI	NE-TC	2	Binder	3	0
CERI	JapanCERI	NPhenol	2	Binder	3	0
CERI	JapanCERI	OTES	0	Non-Binder	3	0
CERI	JapanCERI	Progesterone	0	Non-Binder	4	0
CERI	JapanCERI	Tamox	2	Binder	3	0
CERI	JapanCERI	Zear	2	Binder	3	0
CERI	Lovelace	Atr	1	Equivocal	2	0
CERI	Lovelace	BPA	2	Binder	3	0
CERI	Lovelace	BaA	0.666667	Equivocal	3	0
CERI	Lovelace	ButylPar	2	Binder	2	0
CERI	Lovelace	Cort	1	Equivocal	3	0
CERI	Lovelace	DBP	0.55	Equivocal	20	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Lovelace	DBP-TC	1.625	Binder	8	0
CERI	Lovelace	DDT	2	Binder	2	0
CERI	Lovelace	DES	2	Binder	4	0
CERI	Lovelace	DHT	1.666667	Binder	3	0
CERI	Lovelace	E2-TC	1.333333	Equivocal	9	0
CERI	Lovelace	EE2	1	Equivocal	4	0
CERI	Lovelace	EE2_10xDilution	2	Binder	1	0
CERI	Lovelace	EE2_b	1.2	Equivocal	5	0
CERI	Lovelace	ELactone	1.5	Binder	2	0
CERI	Lovelace	Equol	1.333333	Equivocal	3	0
CERI	Lovelace	Gen	1	Equivocal	1	0
CERI	Lovelace	Heptylphenol	1	Equivocal	3	0
CERI	Lovelace	Hexestrol	1.5	Binder	4	0
CERI	Lovelace	Kepone	2	Binder	2	0
CERI	Lovelace	NE-TC	2	Binder	3	0
CERI	Lovelace	NPhenol	2	Binder	1	0
CERI	Lovelace	OTES	0	Non-Binder	2	0
CERI	Lovelace	Progesterone	0	Non-Binder	2	0
CERI	Lovelace	Tamox	2	Binder	3	0
CERI	Lovelace	Zear	2	Binder	3	0
CERI	Missouri	Atr	0	Non-Binder	6	0
CERI	Missouri	BPA	1.777778	Binder	9	0
CERI	Missouri	BaA	0	Non-Binder	6	0
CERI	Missouri	ButylPar	2	Binder	3	0
CERI	Missouri	Cort	0.333333	Non-Binder	3	0
CERI	Missouri	Cort_b	0	Non-Binder	6	0
CERI	Missouri	DBP	0.071429	Non-Binder	28	0
CERI	Missouri	DBP-TC	0	Non-Binder	3	0
CERI	Missouri	DDT	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	DES	2	Binder	3	0
CERI	Missouri	DHT	1.333333	Equivocal	3	0
CERI	Missouri	Dex	0.333333	Non-Binder	6	0
CERI	Missouri	E2-TC	1.333333	Equivocal	3	0
CERI	Missouri	EE2	2	Binder	3	0
CERI	Missouri	ELactone	0.666667	Equivocal	6	0
CERI	Missouri	Equol	2	Binder	3	0
CERI	Missouri	Gen	1.666667	Binder	3	0
CERI	Missouri	Gen_b	1.166667	Equivocal	6	0
CERI	Missouri	HPTE	1.833333	Binder	6	0
CERI	Missouri	Heptylphenol	1	Equivocal	6	0
CERI	Missouri	Hexestrol	2	Binder	3	0
CERI	Missouri	Kepone	2	Binder	6	0
CERI	Missouri	NE-TC	2	Binder	3	0
CERI	Missouri	NPhenol	2	Binder	3	0
CERI	Missouri	Nethdrone	1.75	Binder	12	0
CERI	Missouri	OTES	0.166667	Non-Binder	12	0
CERI	Missouri	Progesterone	0	Non-Binder	6	0
CERI	Missouri	Tamox	1.666667	Binder	3	0
CERI	Missouri	Zear	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table B-3. FWA, Test Chemical Binding Classifications by Subtask within Each Laboratory, Based on Acceptable and Testable Runs. Binder (Avg=>1.5), Equivocal (0.5<=Avg <1.5), Non-Binder (Avg<0.5).

Protocol	Chemical	SubTask	Laboratory	Average vote	Binding Status	# of Testable runs	# of Non-Testable runs
FWA	Atr	st12	Lovelace	0	Non-Binder	1	0
FWA	Atr	st3	Ceetox	0.333333	Non-Binder	3	0
FWA	Atr	st3	Dietrich	0.75	Equivocal	4	0
FWA	Atr	st3	Freyberger	0	Non-Binder	3	0
FWA	Atr	st3	JapanCERi	0	Non-Binder	4	0
FWA	Atr	st3	Missouri	0	Non-Binder	3	0
FWA	BPA	st3	Ceetox	2	Binder	2	0
FWA	BPA	st3	Dietrich	2	Binder	1	0
FWA	BPA	st3	Freyberger	2	Binder	2	0
FWA	BPA	st3	JapanCERi	2	Binder	3	0
FWA	BPA	st3	Lovelace	2	Binder	1	0
FWA	BPA	st3	Missouri	2	Binder	3	0
FWA	BPA	st4	Ceetox	1.8	Binder	5	0
FWA	BPA	st4	Missouri	2	Binder	7	0
FWA	BaA_DMSO	st3	Ceetox	0.666667	Equivocal	3	0
FWA	BaA_DMSO	st3	JapanCERi	0.25	Non-Binder	4	0
FWA	BaA_DMSO	st3	Missouri	0	Non-Binder	2	0
FWA	BaA_Ethol	st3	Dietrich	0.25	Non-Binder	4	0
FWA	BaA_Ethol	st3	Freyberger	0	Non-Binder	3	0
FWA	BaA_Ethol	st3	Missouri	0	Non-Binder	2	0
FWA	ButylPar	st2	Ceetox	2	Binder	3	0
FWA	ButylPar	st2	Dietrich	1.5	Binder	2	0
FWA	ButylPar	st2	Freyberger	2	Binder	3	0
FWA	ButylPar	st2	JapanCERi	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	ButylPar	st2	Lovelace	2	Binder	2	0
FWA	ButylPar	st2	Missouri	2	Binder	4	0
FWA	ButylPar	st3	Dietrich	2	Binder	1	0
FWA	Cort	st2	Ceetox	0	Non-Binder	3	0
FWA	Cort	st2	Dietrich	1	Equivocal	2	0
FWA	Cort	st2	Freyberger	0	Non-Binder	6	0
FWA	Cort	st2	JapanCERl	0	Non-Binder	3	0
FWA	Cort	st2	Lovelace	2	Binder	1	0
FWA	Cort	st2	Missouri	0	Non-Binder	4	0
FWA	Cort_b	st3	Dietrich	0.25	Non-Binder	4	0
FWA	Cort_b	st4	Ceetox	0	Non-Binder	6	0
FWA	Cort_b	st4	Missouri	0.125	Non-Binder	8	0
FWA	DBP	st1	Ceetox	1	Equivocal	1	0
FWA	DBP	st1	Dietrich	1	Equivocal	1	0
FWA	DBP	st1	JapanCERl	0	Non-Binder	3	0
FWA	DBP	st1	Missouri	0	Non-Binder	5	0
FWA	DBP	st12	Lovelace	0	Non-Binder	2	0
FWA	DBP	st2	Ceetox	0	Non-Binder	3	0
FWA	DBP	st2	Dietrich	0	Non-Binder	3	0
FWA	DBP	st2	Freyberger	0	Non-Binder	6	0
FWA	DBP	st2	JapanCERl	0	Non-Binder	3	0
FWA	DBP	st2	Lovelace	0.5	Equivocal	2	0
FWA	DBP	st2	Missouri	0	Non-Binder	4	0
FWA	DBP	st3	Ceetox	0	Non-Binder	5	0
FWA	DBP	st3	Dietrich	0	Non-Binder	7	0
FWA	DBP	st3	Freyberger	0.2	Non-Binder	5	0
FWA	DBP	st3	JapanCERl	0	Non-Binder	10	0
FWA	DBP	st3	Lovelace	0	Non-Binder	2	0
FWA	DBP	st3	Missouri	0	Non-Binder	8	0
FWA	DBP	st4	Ceetox	0	Non-Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	DBP	st4	Missouri	0	Non-Binder	8	0
FWA	DBP-TC	st12	Lovelace	1.5	Binder	2	0
FWA	DBP-TC	st3	Ceetox	0.5	Equivocal	2	0
FWA	DBP-TC	st3	Dietrich	1	Equivocal	1	0
FWA	DBP-TC	st3	Freyberger	0.5	Equivocal	2	0
FWA	DBP-TC	st3	JapanCERI	1	Equivocal	2	0
FWA	DBP-TC	st3	Missouri	0.666667	Equivocal	3	0
FWA	DDT	st2	Ceetox	2	Binder	3	0
FWA	DDT	st2	Dietrich	1.5	Binder	2	0
FWA	DDT	st2	Freyberger	2	Binder	6	0
FWA	DDT	st2	JapanCERI	2	Binder	3	0
FWA	DDT	st2	Lovelace	2	Binder	1	0
FWA	DDT	st2	Missouri	2	Binder	4	0
FWA	DDT	st3	Dietrich	1.8	Binder	5	0
FWA	DES	st2	Ceetox	2	Binder	3	0
FWA	DES	st2	Dietrich	1.5	Binder	2	0
FWA	DES	st2	Freyberger	2	Binder	3	0
FWA	DES	st2	JapanCERI	2	Binder	3	0
FWA	DES	st2	Lovelace	2	Binder	2	0
FWA	DES	st2	Missouri	2	Binder	4	0
FWA	DES	st3	Dietrich	1.75	Binder	4	0
FWA	DHT	st3	Ceetox	2	Binder	2	0
FWA	DHT	st3	Dietrich	1.75	Binder	4	0
FWA	DHT	st3	Freyberger	2	Binder	3	0
FWA	DHT	st3	JapanCERI	2	Binder	2	0
FWA	DHT	st3	Lovelace	2	Binder	1	0
FWA	DHT	st3	Missouri	2	Binder	3	0
FWA	Dex	st3	Dietrich	0.75	Equivocal	4	0
FWA	Dex	st4	Ceetox	0	Non-Binder	6	0
FWA	Dex	st4	Missouri	0.125	Non-Binder	8	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	E2-TC	st12	Lovelace	1.5	Binder	2	0
FWA	E2-TC	st3	Ceetox	2	Binder	2	0
FWA	E2-TC	st3	Dietrich	1.75	Binder	4	0
FWA	E2-TC	st3	Freyberger	1.333333	Equivocal	3	0
FWA	E2-TC	st3	JapanCERl	1.833333	Binder	6	0
FWA	E2-TC	st3	Lovelace	2	Binder	1	0
FWA	E2-TC	st3	Missouri	2	Binder	3	0
FWA	EE2	st2	Ceetox	2	Binder	3	0
FWA	EE2	st2	Dietrich	1.5	Binder	2	0
FWA	EE2	st2	Freyberger	2	Binder	3	0
FWA	EE2	st2	JapanCERl	2	Binder	3	0
FWA	EE2	st2	Lovelace	2	Binder	1	0
FWA	EE2	st2	Missouri	2	Binder	4	0
FWA	EE2	st3	Dietrich	1.6	Binder	5	0
FWA	EE2_b	st12	Lovelace	1.5	Binder	2	0
FWA	ELactone	st3	Ceetox	2	Binder	2	0
FWA	ELactone	st3	Dietrich	2	Binder	1	0
FWA	ELactone	st3	Freyberger	1.5	Binder	2	0
FWA	ELactone	st3	JapanCERl	2	Binder	3	0
FWA	ELactone	st3	Missouri	2	Binder	2	0
FWA	Equol	st2	Ceetox	2	Binder	3	0
FWA	Equol	st2	Dietrich	2	Binder	2	0
FWA	Equol	st2	Freyberger	2	Binder	3	0
FWA	Equol	st2	JapanCERl	2	Binder	3	0
FWA	Equol	st2	Missouri	2	Binder	4	0
FWA	Equol	st3	Dietrich	2	Binder	1	0
FWA	Gen	st2	Ceetox	2	Binder	3	0
FWA	Gen	st2	Dietrich	2	Binder	3	0
FWA	Gen	st2	Freyberger	1.833333	Binder	6	0
FWA	Gen	st2	JapanCERl	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Gen	st2	Lovelace	2	Binder	2	0
FWA	Gen	st2	Missouri	2	Binder	4	0
FWA	Gen	st3	Dietrich	1.5	Binder	4	0
FWA	GenW	st2	Missouri	2	Binder	4	0
FWA	Gen_b	st4	Ceetox	2	Binder	6	0
FWA	Gen_b	st4	Missouri	1.857143	Binder	7	0
FWA	HPTE	st3	Dietrich	2	Binder	1	0
FWA	HPTE	st4	Ceetox	2	Binder	6	0
FWA	HPTE	st4	Missouri	1.875	Binder	8	0
FWA	Heptylphenol	st12	Lovelace	2	Binder	1	0
FWA	Heptylphenol	st3	Ceetox	1.5	Binder	2	0
FWA	Heptylphenol	st3	Dietrich	2	Binder	3	0
FWA	Heptylphenol	st3	Freyberger	2	Binder	3	0
FWA	Heptylphenol	st3	JapanCERl	2	Binder	3	0
FWA	Heptylphenol	st3	Lovelace	2	Binder	1	0
FWA	Heptylphenol	st3	Missouri	0	Non-Binder	2	0
FWA	Hexestrol	st2	Ceetox	2	Binder	3	0
FWA	Hexestrol	st2	Dietrich	2	Binder	3	0
FWA	Hexestrol	st2	Freyberger	2	Binder	3	0
FWA	Hexestrol	st2	JapanCERl	2	Binder	3	0
FWA	Hexestrol	st2	Lovelace	2	Binder	2	0
FWA	Hexestrol	st2	Missouri	2	Binder	4	0
FWA	Hexestrol	st3	Dietrich	2	Binder	4	0
FWA	Kepone	st12	Lovelace	2	Binder	1	0
FWA	Kepone	st3	Ceetox	2	Binder	2	0
FWA	Kepone	st3	Dietrich	1.6	Binder	5	0
FWA	Kepone	st3	Freyberger	2	Binder	2	0
FWA	Kepone	st3	JapanCERl	2	Binder	2	0
FWA	Kepone	st3	Lovelace	2	Binder	1	0
FWA	Kepone	st3	Missouri	2	Binder	2	0

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

FWA	NE-TC	st3	Ceetox	2	Binder	2	0
FWA	NE-TC	st3	Dietrich	1.5	Binder	4	0
FWA	NE-TC	st3	Freyberger	2	Binder	3	0
FWA	NE-TC	st3	JapanCERi	2	Binder	3	0
FWA	NE-TC	st3	Lovelace	2	Binder	1	0
FWA	NE-TC	st3	Missouri	2	Binder	3	0
FWA	NPhenol	st2	Ceetox	2	Binder	3	0
FWA	NPhenol	st2	Dietrich	2	Binder	2	0
FWA	NPhenol	st2	Freyberger	2	Binder	3	0
FWA	NPhenol	st2	JapanCERi	2	Binder	3	0
FWA	NPhenol	st2	Lovelace	2	Binder	1	0
FWA	NPhenol	st2	Missouri	2	Binder	4	0
FWA	NPhenol	st3	Dietrich	1.75	Binder	4	0
FWA	Nethdrone	st3	Dietrich	1.75	Binder	4	0
FWA	Nethdrone	st4	Ceetox	1.916667	Binder	12	0
FWA	Nethdrone	st4	Missouri	2	Binder	15	0
FWA	OTES	st3	Ceetox	0.5	Equivocal	2	0
FWA	OTES	st3	Dietrich	0	Non-Binder	1	0
FWA	OTES	st3	Freyberger	0	Non-Binder	3	0
FWA	OTES	st3	JapanCERi	0	Non-Binder	5	0
FWA	OTES	st3	Missouri	0	Non-Binder	3	0
FWA	OTES	st4	Ceetox	0	Non-Binder	6	0
FWA	OTES	st4	Missouri	0	Non-Binder	7	0
FWA	Progesterone	st12	Lovelace	2	Binder	1	0
FWA	Progesterone	st3	Ceetox	0.5	Equivocal	2	0
FWA	Progesterone	st3	Dietrich	0	Non-Binder	1	0
FWA	Progesterone	st3	Freyberger	0	Non-Binder	2	0
FWA	Progesterone	st3	JapanCERi	0.25	Non-Binder	4	0
FWA	Progesterone	st3	Lovelace	2	Binder	1	0
FWA	Progesterone	st3	Missouri	0	Non-Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Tamox	st3	Ceetox	2	Binder	2	0
FWA	Tamox	st3	Dietrich	1.75	Binder	4	0
FWA	Tamox	st3	Freyberger	2	Binder	2	0
FWA	Tamox	st3	JapanCERI	2	Binder	3	0
FWA	Tamox	st3	Lovelace	2	Binder	1	0
FWA	Tamox	st3	Missouri	2	Binder	3	0
FWA	Zear	st3	Ceetox	2	Binder	1	0
FWA	Zear	st3	Dietrich	2	Binder	1	0
FWA	Zear	st3	Freyberger	1.666667	Binder	3	0
FWA	Zear	st3	JapanCERI	2	Binder	4	0
FWA	Zear	st3	Lovelace	2	Binder	1	0
FWA	Zear	st3	Missouri	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Table B-4. FWA, Test Chemical Binding Classifications within Each Laboratory, Based on Acceptable and Testable Runs. Binder (Avg=>1.5), Equivocal (0.5<=Avg<1.5), Non-Binder (Avg<0.5).

Protocol	Laboratory	Chemical	Average vote	Binding Status	# of Testable runs	# of Non-Testable runs
FWA	Ceetox	Atr	0.333333	Non-Binder	3	0
FWA	Ceetox	BPA	1.857143	Binder	7	0
FWA	Ceetox	BaA_DMSO	0.666667	Equivocal	3	0
FWA	Ceetox	ButylPar	2	Binder	3	0
FWA	Ceetox	Cort	0	Non-Binder	3	0
FWA	Ceetox	Cort_b	0	Non-Binder	6	0
FWA	Ceetox	DBP	0.083333	Non-Binder	12	0
FWA	Ceetox	DBP-TC	0.5	Equivocal	2	0
FWA	Ceetox	DDT	2	Binder	3	0
FWA	Ceetox	DES	2	Binder	3	0
FWA	Ceetox	DHT	2	Binder	2	0
FWA	Ceetox	Dex	0	Non-Binder	6	0
FWA	Ceetox	E2-TC	2	Binder	2	0
FWA	Ceetox	EE2	2	Binder	3	0
FWA	Ceetox	ELactone	2	Binder	2	0
FWA	Ceetox	Equol	2	Binder	3	0
FWA	Ceetox	Gen	2	Binder	3	0
FWA	Ceetox	Gen_b	2	Binder	6	0
FWA	Ceetox	HPTE	2	Binder	6	0
FWA	Ceetox	Heptylphenol	1.5	Binder	2	0
FWA	Ceetox	Hexestrol	2	Binder	3	0
FWA	Ceetox	Kepone	2	Binder	2	0
FWA	Ceetox	NE-TC	2	Binder	2	0
FWA	Ceetox	NPhenol	2	Binder	3	0
FWA	Ceetox	Nethdrone	1.916667	Binder	12	0
FWA	Ceetox	OTES	0.125	Non-Binder	8	0
FWA	Ceetox	Progesterone	0.5	Equivocal	2	0
FWA	Ceetox	Tamox	2	Binder	2	0
FWA	Ceetox	Zear	2	Binder	1	0
FWA	Dietrich	Atr	0.75	Equivocal	4	0
FWA	Dietrich	BPA	2	Binder	1	0
FWA	Dietrich	BaA_Ethol	0.25	Non-Binder	4	0
FWA	Dietrich	ButylPar	1.666667	Binder	3	0
FWA	Dietrich	Cort	1	Equivocal	2	0
FWA	Dietrich	Cort_b	0.25	Non-Binder	4	0
FWA	Dietrich	DBP	0.090909	Non-Binder	11	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Dietrich	DBP-TC	1	Equivocal	1	0
FWA	Dietrich	DDT	1.714286	Binder	7	0
FWA	Dietrich	DES	1.666667	Binder	6	0
FWA	Dietrich	DHT	1.75	Binder	4	0
FWA	Dietrich	Dex	0.75	Equivocal	4	0
FWA	Dietrich	E2-TC	1.75	Binder	4	0
FWA	Dietrich	EE2	1.571429	Binder	7	0
FWA	Dietrich	ELactone	2	Binder	1	0
FWA	Dietrich	Equol	2	Binder	3	0
FWA	Dietrich	Gen	1.714286	Binder	7	0
FWA	Dietrich	HPTE	2	Binder	1	0
FWA	Dietrich	Heptylphenol	2	Binder	3	0
FWA	Dietrich	Hexestrol	2	Binder	7	0
FWA	Dietrich	Kepone	1.6	Binder	5	0
FWA	Dietrich	NE-TC	1.5	Binder	4	0
FWA	Dietrich	NPhenol	1.833333	Binder	6	0
FWA	Dietrich	Nethdrone	1.75	Binder	4	0
FWA	Dietrich	OTES	0	Non-Binder	1	0
FWA	Dietrich	Progesterone	0	Non-Binder	1	0
FWA	Dietrich	Tamox	1.75	Binder	4	0
FWA	Dietrich	Zear	2	Binder	1	0
FWA	Freyberger	Atr	0	Non-Binder	3	0
FWA	Freyberger	BPA	2	Binder	2	0
FWA	Freyberger	BaA_Ethol	0	Non-Binder	3	0
FWA	Freyberger	ButylPar	2	Binder	3	0
FWA	Freyberger	Cort	0	Non-Binder	6	0
FWA	Freyberger	DBP	0.090909	Non-Binder	11	0
FWA	Freyberger	DBP-TC	0.5	Equivocal	2	0
FWA	Freyberger	DDT	2	Binder	6	0
FWA	Freyberger	DES	2	Binder	3	0
FWA	Freyberger	DHT	2	Binder	3	0
FWA	Freyberger	E2-TC	1.333333	Equivocal	3	0
FWA	Freyberger	EE2	2	Binder	3	0
FWA	Freyberger	ELactone	1.5	Binder	2	0
FWA	Freyberger	Equol	2	Binder	3	0
FWA	Freyberger	Gen	1.833333	Binder	6	0
FWA	Freyberger	Heptylphenol	2	Binder	3	0
FWA	Freyberger	Hexestrol	2	Binder	3	0
FWA	Freyberger	Kepone	2	Binder	2	0
FWA	Freyberger	NE-TC	2	Binder	3	0
FWA	Freyberger	NPhenol	2	Binder	3	0
FWA	Freyberger	OTES	0	Non-Binder	3	0
FWA	Freyberger	Progesterone	0	Non-Binder	2	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Freyberger	Tamox	2	Binder	2	0
FWA	Freyberger	Zear	1.666667	Binder	3	0
FWA	JapanCERI	Atr	0	Non-Binder	4	0
FWA	JapanCERI	BPA	2	Binder	3	0
FWA	JapanCERI	BaA_DMSO	0.25	Non-Binder	4	0
FWA	JapanCERI	ButylPar	2	Binder	3	0
FWA	JapanCERI	Cort	0	Non-Binder	3	0
FWA	JapanCERI	DBP	0	Non-Binder	16	0
FWA	JapanCERI	DBP-TC	1	Equivocal	2	0
FWA	JapanCERI	DDT	2	Binder	3	0
FWA	JapanCERI	DES	2	Binder	3	0
FWA	JapanCERI	DHT	2	Binder	2	0
FWA	JapanCERI	E2-TC	1.833333	Binder	6	0
FWA	JapanCERI	EE2	2	Binder	3	0
FWA	JapanCERI	ELactone	2	Binder	3	0
FWA	JapanCERI	Equol	2	Binder	3	0
FWA	JapanCERI	Gen	2	Binder	3	0
FWA	JapanCERI	Heptylphenol	2	Binder	3	0
FWA	JapanCERI	Hexestrol	2	Binder	3	0
FWA	JapanCERI	Kepone	2	Binder	2	0
FWA	JapanCERI	NE-TC	2	Binder	3	0
FWA	JapanCERI	NPhenol	2	Binder	3	0
FWA	JapanCERI	OTES	0	Non-Binder	5	0
FWA	JapanCERI	Progesterone	0.25	Non-Binder	4	0
FWA	JapanCERI	Tamox	2	Binder	3	0
FWA	JapanCERI	Zear	2	Binder	4	0
FWA	Lovelace	Atr	0	Non-Binder	1	0
FWA	Lovelace	BPA	2	Binder	1	0
FWA	Lovelace	ButylPar	2	Binder	2	0
FWA	Lovelace	Cort	2	Binder	1	0
FWA	Lovelace	DBP	0.166667	Non-Binder	6	0
FWA	Lovelace	DBP-TC	1.5	Binder	2	0
FWA	Lovelace	DDT	2	Binder	1	0
FWA	Lovelace	DES	2	Binder	2	0
FWA	Lovelace	DHT	2	Binder	1	0
FWA	Lovelace	E2-TC	1.666667	Binder	3	0
FWA	Lovelace	EE2	2	Binder	1	0
FWA	Lovelace	EE2_b	1.5	Binder	2	0
FWA	Lovelace	Gen	2	Binder	2	0
FWA	Lovelace	Heptylphenol	2	Binder	2	0
FWA	Lovelace	Hexestrol	2	Binder	2	0
FWA	Lovelace	Kepone	2	Binder	2	0
FWA	Lovelace	NE-TC	2	Binder	1	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Lovelace	NPhenol	2	Binder	1	0
FWA	Lovelace	Progesterone	2	Binder	2	0
FWA	Lovelace	Tamox	2	Binder	1	0
FWA	Lovelace	Zear	2	Binder	1	0
FWA	Missouri	Atr	0	Non-Binder	3	0
FWA	Missouri	BPA	2	Binder	10	0
FWA	Missouri	BaA_DMSO	0	Non-Binder	2	0
FWA	Missouri	BaA_Ethol	0	Non-Binder	2	0
FWA	Missouri	ButylPar	2	Binder	4	0
FWA	Missouri	Cort	0	Non-Binder	4	0
FWA	Missouri	Cort_b	0.125	Non-Binder	8	0
FWA	Missouri	DBP	0	Non-Binder	25	0
FWA	Missouri	DBP-TC	0.666667	Equivocal	3	0
FWA	Missouri	DDT	2	Binder	4	0
FWA	Missouri	DES	2	Binder	4	0
FWA	Missouri	DHT	2	Binder	3	0
FWA	Missouri	Dex	0.125	Non-Binder	8	0
FWA	Missouri	E2-TC	2	Binder	3	0
FWA	Missouri	EE2	2	Binder	4	0
FWA	Missouri	ELactone	2	Binder	2	0
FWA	Missouri	Equol	2	Binder	4	0
FWA	Missouri	Gen	2	Binder	4	0
FWA	Missouri	GenW	2	Binder	4	0
FWA	Missouri	Gen_b	1.857143	Binder	7	0
FWA	Missouri	HPTE	1.875	Binder	8	0
FWA	Missouri	Heptylphenol	0	Non-Binder	2	0
FWA	Missouri	Hexestrol	2	Binder	4	0
FWA	Missouri	Kepone	2	Binder	2	0
FWA	Missouri	NE-TC	2	Binder	3	0
FWA	Missouri	NPhenol	2	Binder	4	0
FWA	Missouri	Nethdrone	2	Binder	15	0
FWA	Missouri	OTES	0	Non-Binder	10	0
FWA	Missouri	Progesterone	0	Non-Binder	3	0
FWA	Missouri	Tamox	2	Binder	3	0
FWA	Missouri	Zear	2	Binder	3	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Table B-5¹. CERI, Test Chemical Binding Classifications by Individual Test Run, Based on Acceptable and Testable Runs. Binder (=2), Equivocal (=1), Non-Binder (=0).

Protocol	Laboratory	Chemical	SubTask	Test	Individual Run Classification Vote
CERI	Ceetox	DBP	st1	20090207	0
CERI	Ceetox	DBP	st1	20090208	0
CERI	Ceetox	DBP	st1	20090211	0
CERI	Ceetox	DBP	st2	20090215	0
CERI	Ceetox	DBP	st2	20090221	0
CERI	Ceetox	DBP	st3	20090310A	0
CERI	Ceetox	DBP	st4	20090903A	0
CERI	Ceetox	DBP	st4	20090905A	0
CERI	Ceetox	DBP	st4	20090930A	0
CERI	Ceetox	ButylPar	st2	20090215	2
CERI	Ceetox	ButylPar	st2	20090221	2
CERI	Ceetox	Cort	st2	20090215	0
CERI	Ceetox	Cort	st2	20090221	0
CERI	Ceetox	Equol	st2	20090215	2
CERI	Ceetox	Equol	st2	20090221	2
CERI	Ceetox	Hexestrol	st2	20090215	2
CERI	Ceetox	Hexestrol	st2	20090221	2
CERI	Ceetox	NPhenol	st2	20090215	2
CERI	Ceetox	NPhenol	st2	20090221	1
CERI	Ceetox	DDT	st2	20090215	2
CERI	Ceetox	DDT	st2	20090221	2
CERI	Ceetox	DES	st2	20090215	2
CERI	Ceetox	DES	st2	20090221	2
CERI	Ceetox	Gen	st2	20090215	2

¹ Table B-5 has been updated to indicate particular equivocal runs that were reanalyzed using the 10% Rule and new classification as described on pages 1-4 and in Table C-1.

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Ceetox	Gen	st2	20090221	2
CERI	Ceetox	E2-TC	st3	20090310A	2
CERI	Ceetox	NE-TC	st3	20090310A	2
CERI	Ceetox	DBP-TC	st3	20090310A	2
CERI	Ceetox	Zear	st3	20090310A	2
CERI	Ceetox	Tamox	st3	20090310A	2
CERI	Ceetox	DHT	st3	20090310A	2
CERI	Ceetox	BPA	st3	20090310A	2
CERI	Ceetox	Heptylphenol	st3	20090310A	2
CERI	Ceetox	Kepone	st3	20090310A	2
CERI	Ceetox	BaA	st3	20090310A	0
CERI	Ceetox	ELactone	st3	20090310A	2
CERI	Ceetox	Progesterone	st3	20090310A	0
CERI	Ceetox	OTES	st3	20090310B	0
CERI	Ceetox	Atr	st3	20090310B	0
CERI	Ceetox	Cort-1	st4	20090903A	0
CERI	Ceetox	Cort-1	st4	20090905A	0
CERI	Ceetox	Cort-1	st4	20090930A	0
CERI	Ceetox	Dex-1	st4	20090903A	0
CERI	Ceetox	Dex-1	st4	20090905A	0
CERI	Ceetox	Dex-1	st4	20090930A	0
CERI	Ceetox	Nethdrone-1	st4	20090905A	2
CERI	Ceetox	Nethdrone-1	st4	20090930A	2
CERI	Ceetox	HPTE-1	st4	20090903A	2
CERI	Ceetox	HPTE-1	st4	20090905A	2
CERI	Ceetox	HPTE-1	st4	20090930A	2
CERI	Ceetox	Gen-1	st4	20090903A	2
CERI	Ceetox	Gen-1	st4	20090905A	2
CERI	Ceetox	Gen-1	st4	20090930A	2
CERI	Ceetox	BPA-1	st4	20090903A	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Ceetox	BPA-1	st4	20090905A	2
CERI	Ceetox	BPA-1	st4	20090930A	2
CERI	Ceetox	OTES-1	st4	20090903A	0
CERI	Ceetox	OTES-1	st4	20090905A	0
CERI	Ceetox	OTES-1	st4	20090930A	0
CERI	Ceetox	Nethdrone-2	st4	20090903A	2
CERI	Ceetox	Nethdrone-2	st4	20090905A	2
CERI	Ceetox	Nethdrone-2	st4	20090930A	2
CERI	Ceetox	BPA-2	st4	20090903A	2
CERI	Ceetox	BPA-2	st4	20090905A	2
CERI	Ceetox	BPA-2	st4	20090930A	2
CERI	Ceetox	Dex-2	st4	20090903A	0
CERI	Ceetox	Dex-2	st4	20090905A	1
CERI	Ceetox	Dex-2	st4	20090930A	1 (10% rule, no change in classification)
CERI	Ceetox	Nethdrone-3	st4	20090903A	2
CERI	Ceetox	Nethdrone-3	st4	20090905A	2
CERI	Ceetox	Nethdrone-3	st4	20090930A	2
CERI	Ceetox	Cort-2	st4	20090903A	1 (10% rule, no change in classification)
CERI	Ceetox	Cort-2	st4	20090905A	0
CERI	Ceetox	Cort-2	st4	20090930A	1 (10% rule, no change in classification)
CERI	Ceetox	HPTE-2	st4	20090903B	2
CERI	Ceetox	HPTE-2	st4	20090905B	2
CERI	Ceetox	HPTE-2	st4	20090930B	2
CERI	Ceetox	OTES-2	st4	20090903B	0
CERI	Ceetox	OTES-2	st4	20090905B	0
CERI	Ceetox	OTES-2	st4	20090930B	0
CERI	Ceetox	Nethdrone-4	st4	20090903B	2
CERI	Ceetox	Nethdrone-4	st4	20090905B	2
CERI	Ceetox	Nethdrone-4	st4	20090930B	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Ceetox	Gen-2	st4	20090903B	2
CERI	Ceetox	Gen-2	st4	20090905B	2
CERI	Ceetox	Gen-2	st4	20090930B	4 2 (10% rule, Reclassified as 2)
CERI	Ceetox	EE2	st2	20090215	2
CERI	Ceetox	EE2	st2	20090221	1 (10% rule, No change classification
CERI	Ceetox	Nethdrone	st4	20090903A	2
CERI	Freyberger	DBP	st2	B	0
CERI	Freyberger	DBP	st2	C	0
CERI	Freyberger	DBP	st2	D	0
CERI	Freyberger	DBP	st2	E	0
CERI	Freyberger	DBP	st2	F	0
CERI	Freyberger	DBP	st2	G	0
CERI	Freyberger	DBP	st3	CODE A2	1
CERI	Freyberger	DBP	st3	CODE A3	0
CERI	Freyberger	DBP	st3	CODE B1	0
CERI	Freyberger	DBP	st3	CODE B2	1
CERI	Freyberger	DBP	st3	CODE B3	0
CERI	Freyberger	DBP	st3	CODE C1	0
CERI	Freyberger	DBP	st3	CODE C2	0
CERI	Freyberger	DBP	st3	CODE C3	0
CERI	Freyberger	ButylPar	st2	B	2
CERI	Freyberger	ButylPar	st2	C	2
CERI	Freyberger	ButylPar	st2	D	2
CERI	Freyberger	Cort	st2	B	1 (10% rule, No change classification
CERI	Freyberger	Cort	st2	C	0
CERI	Freyberger	Cort	st2	D	0
CERI	Freyberger	Equol	st2	B	2
CERI	Freyberger	Equol	st2	C	2
CERI	Freyberger	Equol	st2	D	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Freyberger	Hexestrol	st2	B	2
CERI	Freyberger	Hexestrol	st2	C	2
CERI	Freyberger	Hexestrol	st2	D	2
CERI	Freyberger	NPhenol	st2	E	2
CERI	Freyberger	NPhenol	st2	F	2
CERI	Freyberger	NPhenol	st2	G	2
CERI	Freyberger	DDT	st2	E	2
CERI	Freyberger	DDT	st2	F	2
CERI	Freyberger	DDT	st2	G	2
CERI	Freyberger	DES	st2	E	2
CERI	Freyberger	DES	st2	F	2
CERI	Freyberger	DES	st2	G	2
CERI	Freyberger	Gen	st2	E	± 2 (10% rule, Reclassified as 2)
CERI	Freyberger	Gen	st2	F	± 2 (10% rule, Reclassified as 2)
CERI	Freyberger	Gen	st2	G	± 2 (10% rule, Reclassified as 2)
CERI	Freyberger	E2-TC	st3	CODE A2	2
CERI	Freyberger	E2-TC	st3	CODE A3	1
CERI	Freyberger	NE-TC	st3	CODE C1	2
CERI	Freyberger	NE-TC	st3	CODE C2	2
CERI	Freyberger	NE-TC	st3	CODE C3	2
CERI	Freyberger	DBP-TC	st3	CODE B1	2
CERI	Freyberger	DBP-TC	st3	CODE B2	2
CERI	Freyberger	DBP-TC	st3	CODE B3	2
CERI	Freyberger	Zear	st3	CODE B1	2
CERI	Freyberger	Zear	st3	CODE B2	2
CERI	Freyberger	Zear	st3	CODE B3	2
CERI	Freyberger	Tamox	st3	CODE A2	2
CERI	Freyberger	Tamox	st3	CODE A3	1

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Freyberger	DHT	st3	CODE B1	2
CERI	Freyberger	DHT	st3	CODE B2	2
CERI	Freyberger	DHT	st3	CODE B3	2
CERI	Freyberger	BPA	st3	CODE A2	2
CERI	Freyberger	BPA	st3	CODE A3	2
CERI	Freyberger	Heptylphenol	st3	CODE B1	2
CERI	Freyberger	Heptylphenol	st3	CODE B2	2
CERI	Freyberger	Heptylphenol	st3	CODE B3	2
CERI	Freyberger	Kepone	st3	CODE A2	2
CERI	Freyberger	Kepone	st3	CODE A3	2
CERI	Freyberger	BaA	st3	CODE C1	0
CERI	Freyberger	BaA	st3	CODE C2	0
CERI	Freyberger	BaA	st3	CODE C3	0
CERI	Freyberger	ELactone	st3	CODE A2	2
CERI	Freyberger	ELactone	st3	CODE A3	2
CERI	Freyberger	Progesterone	st3	CODE C1	0
CERI	Freyberger	Progesterone	st3	CODE C2	0
CERI	Freyberger	Progesterone	st3	CODE C3	0
CERI	Freyberger	OTES	st3	CODE B1	0
CERI	Freyberger	OTES	st3	CODE B2	0
CERI	Freyberger	OTES	st3	CODE B3	0
CERI	Freyberger	Atr	st3	CODE C1	0
CERI	Freyberger	Atr	st3	CODE C2	0
CERI	Freyberger	Atr	st3	CODE C3	0
CERI	Freyberger	EE2	st2	E	2
CERI	Freyberger	EE2	st2	F	2
CERI	Freyberger	EE2	st2	G	2
CERI	JapanCERI	DBP	st1	91224	0
CERI	JapanCERI	DBP	st1	100107	0
CERI	JapanCERI	DBP	st1	100108	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	JapanCERI	DBP	st2	100119	0
CERI	JapanCERI	DBP	st2	100126	0
CERI	JapanCERI	DBP	st2	100129	0
CERI	JapanCERI	DBP	st3	100203	0
CERI	JapanCERI	DBP	st3	100208	0
CERI	JapanCERI	DBP	st3	100215	0
CERI	JapanCERI	DBP	st3	100223	0
CERI	JapanCERI	DBP	st3	100224	0
CERI	JapanCERI	DBP	st3	100225	0
CERI	JapanCERI	DBP	st3	100226	0
CERI	JapanCERI	DBP	st3	100301	0
CERI	JapanCERI	DBP	st3	100303	0
CERI	JapanCERI	DBP	st3	100305	0
CERI	JapanCERI	ButylPar	st2	100119	2
CERI	JapanCERI	ButylPar	st2	100126	2
CERI	JapanCERI	ButylPar	st2	100129	2
CERI	JapanCERI	Cort	st2	100119	0
CERI	JapanCERI	Cort	st2	100126	0
CERI	JapanCERI	Cort	st2	100129	0
CERI	JapanCERI	Equol	st2	100119	2
CERI	JapanCERI	Equol	st2	100126	2
CERI	JapanCERI	Equol	st2	100129	2
CERI	JapanCERI	Hexestrol	st2	100119	2
CERI	JapanCERI	Hexestrol	st2	100126	2
CERI	JapanCERI	Hexestrol	st2	100129	2
CERI	JapanCERI	NPhenol	st2	100119	2
CERI	JapanCERI	NPhenol	st2	100126	2
CERI	JapanCERI	NPhenol	st2	100129	2
CERI	JapanCERI	DDT	st2	100119	2
CERI	JapanCERI	DDT	st2	100126	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	JapanCERI	DDT	st2	100129	2
CERI	JapanCERI	DES	st2	100119	2
CERI	JapanCERI	DES	st2	100126	2
CERI	JapanCERI	DES	st2	100129	2
CERI	JapanCERI	Gen	st2	100119	2
CERI	JapanCERI	Gen	st2	100126	2
CERI	JapanCERI	Gen	st2	100129	1
CERI	JapanCERI	E2-TC	st3	100223	2
CERI	JapanCERI	E2-TC	st3	100224	2
CERI	JapanCERI	E2-TC	st3	100225	2
CERI	JapanCERI	NE-TC	st3	100223	2
CERI	JapanCERI	NE-TC	st3	100224	2
CERI	JapanCERI	NE-TC	st3	100225	2
CERI	JapanCERI	DBP-TC	st3	100203	0
CERI	JapanCERI	DBP-TC	st3	100208	0
CERI	JapanCERI	DBP-TC	st3	100215	0
CERI	JapanCERI	Zear	st3	100203	2
CERI	JapanCERI	Zear	st3	100208	2
CERI	JapanCERI	Zear	st3	100215	2
CERI	JapanCERI	Tamox	st3	100203	2
CERI	JapanCERI	Tamox	st3	100208	2
CERI	JapanCERI	Tamox	st3	100215	2
CERI	JapanCERI	DHT	st3	100203	2
CERI	JapanCERI	DHT	st3	100208	2
CERI	JapanCERI	DHT	st3	100215	2
CERI	JapanCERI	BPA	st3	100203	2
CERI	JapanCERI	BPA	st3	100208	2
CERI	JapanCERI	BPA	st3	100215	2
CERI	JapanCERI	BPA	st3	100226	2
CERI	JapanCERI	Heptylphenol	st3	100223	1

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	JapanCERI	Heptylphenol	st3	100224	1
CERI	JapanCERI	Heptylphenol	st3	100225	1
CERI	JapanCERI	Heptylphenol	st3	100226	1
CERI	JapanCERI	Kepone	st3	100203	2
CERI	JapanCERI	Kepone	st3	100208	2
CERI	JapanCERI	Kepone	st3	100215	2
CERI	JapanCERI	BaA	st3	100203	0
CERI	JapanCERI	BaA	st3	100208	0
CERI	JapanCERI	BaA	st3	100215	0
CERI	JapanCERI	ELactone	st3	100223	1
CERI	JapanCERI	ELactone	st3	100224	1
CERI	JapanCERI	ELactone	st3	100225	1
CERI	JapanCERI	Progesterone	st3	100203	0
CERI	JapanCERI	Progesterone	st3	100208	0
CERI	JapanCERI	Progesterone	st3	100215	0
CERI	JapanCERI	Progesterone	st3	100226	0
CERI	JapanCERI	OTES	st3	100301	0
CERI	JapanCERI	OTES	st3	100303	0
CERI	JapanCERI	OTES	st3	100305	0
CERI	JapanCERI	Atr	st3	100223	0
CERI	JapanCERI	Atr	st3	100224	0
CERI	JapanCERI	Atr	st3	100225	0
CERI	JapanCERI	EE2	st2	100119	2
CERI	JapanCERI	EE2	st2	100126	2
CERI	JapanCERI	EE2	st2	100129	2
CERI	Lovelace	DBP	st1	13-Jan-09	0
CERI	Lovelace	DBP	st1	16-Jan-09	0
CERI	Lovelace	DBP	st12	12-Nov-09	1
CERI	Lovelace	DBP	st12	23-Sep-09	0
CERI	Lovelace	DBP	st12	7-Apr-10 #1	1

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Lovelace	DBP	st12	7-Apr-10 #2	1
CERI	Lovelace	DBP	st12	7-Apr-10 #3	1
CERI	Lovelace	DBP	st2	4-May-09	0
CERI	Lovelace	DBP	st2	5-May-09	1
CERI	Lovelace	DBP	st2	6-May-09	0
CERI	Lovelace	DBP	st2	8-May-09	0
CERI	Lovelace	DBP	st2	26-Feb-09	2
CERI	Lovelace	DBP	st2	27-Feb-09	1
CERI	Lovelace	DBP	st3	1-Jun-09	0
CERI	Lovelace	DBP	st3	4-Jun-09	0
CERI	Lovelace	DBP	st3	8-Jun-09	0
CERI	Lovelace	DBP	st3	10-Jul-09	0
CERI	Lovelace	DBP	st3	10-Jun-09	1
CERI	Lovelace	DBP	st3	11-Jun-09	1
CERI	Lovelace	DBP	st3	15-Jun-09	1
CERI	Lovelace	ButylPar	st2	2-27-2009T	2
CERI	Lovelace	ButylPar	st2	5/8/2009	2
CERI	Lovelace	Cort	st2	2-27-2009T	0
CERI	Lovelace	Cort	st2	5/5/2009	2
CERI	Lovelace	Cort	st2	5-6-2009T	1
CERI	Lovelace	Equol	st2	2-27-2009T	1 (10% rule, No change classification)
CERI	Lovelace	Equol	st2	5/5/2009	2
CERI	Lovelace	Equol	st2	5-6-2009T	1 (10% rule, No change classification)
CERI	Lovelace	Hexestrol	st2	2-27-2009T	1 (10% rule, No change classification)
CERI	Lovelace	Hexestrol	st2	5/4/2009	2
CERI	Lovelace	Hexestrol	st2	5/5/2009	1
CERI	Lovelace	Hexestrol	st2	5-6-2009T	2
CERI	Lovelace	NPhenol	st2	2-27-2009T	2
CERI	Lovelace	DDT	st2	2-27-2009T	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Lovelace	DDT	st2	5/5/2009	2
CERI	Lovelace	DES	st2	2-27-2009T	2
CERI	Lovelace	DES	st2	5/4/2009	2
CERI	Lovelace	DES	st2	5/5/2009	2
CERI	Lovelace	DES	st2	5-6-2009T	2
CERI	Lovelace	Gen	st2	2-27-2009T	1
CERI	Lovelace	E2-TC	st12	11/12/2009	2
CERI	Lovelace	E2-TC	st12	4/7/2010	1 (10% rule, No change classification)
CERI	Lovelace	E2-TC	st12	4-7-2010_2	1
CERI	Lovelace	E2-TC	st12	4-7-2010_3	1 (10% rule, No change classification)
CERI	Lovelace	E2-TC	st12	9/23/2009	2
CERI	Lovelace	E2-TC	st3	6/1/2009	1
CERI	Lovelace	E2-TC	st3	6/4/2009	1
CERI	Lovelace	E2-TC	st3	6/8/2009	1
CERI	Lovelace	E2-TC	st3	7/10/2009	2
CERI	Lovelace	DBP-TC	st12	11/12/2009	2
CERI	Lovelace	DBP-TC	st12	4/7/2010	1
CERI	Lovelace	DBP-TC	st12	4-7-2010_2	2
CERI	Lovelace	DBP-TC	st12	4-7-2010_3	2
CERI	Lovelace	DBP-TC	st12	9/23/2009	2
CERI	Lovelace	DBP-TC	st3	6/10/2009	1
CERI	Lovelace	DBP-TC	st3	6-11-2009T	2
CERI	Lovelace	DBP-TC	st3	7/10/2009	1
CERI	Lovelace	Zear	st3	6/1/2009	2
CERI	Lovelace	Zear	st3	6/4/2009	2
CERI	Lovelace	Zear	st3	6/8/2009	2
CERI	Lovelace	Tamox	st3	6/10/2009	2
CERI	Lovelace	Tamox	st3	6-11-2009T	2
CERI	Lovelace	Tamox	st3	7/10/2009	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Lovelace	DHT	st3	6/10/2009	2
CERI	Lovelace	DHT	st3	6-11-2009T	± 2 (10% rule, Reclassified as 2)
CERI	Lovelace	DHT	st3	7/10/2009	2
CERI	Lovelace	BPA	st3	6/1/2009	2
CERI	Lovelace	BPA	st3	6/4/2009	2
CERI	Lovelace	BPA	st3	6/8/2009	2
CERI	Lovelace	Heptylphenol	st3	6/10/2009	1
CERI	Lovelace	Heptylphenol	st3	6/4/2009	1
CERI	Lovelace	Heptylphenol	st3	6/8/2009	1
CERI	Lovelace	Kepone	st3	6/4/2009	2
CERI	Lovelace	Kepone	st3	6/8/2009	2
CERI	Lovelace	BaA	st3	6-11-2009T	0
CERI	Lovelace	BaA	st3	6/15/2009	0
CERI	Lovelace	BaA	st3	7/10/2009	2
CERI	Lovelace	ELactone	st3	6/4/2009	1
CERI	Lovelace	ELactone	st3	6/8/2009	2
CERI	Lovelace	Progesterone	st3	6/4/2009	0
CERI	Lovelace	Progesterone	st3	6/8/2009	0
CERI	Lovelace	OTES	st3	6/10/2009	0
CERI	Lovelace	OTES	st3	6-11-2009T	0
CERI	Lovelace	Atr	st3	6-11-2009T	1
CERI	Lovelace	Atr	st3	6/15/2009	1
CERI	Lovelace	EE2	st12	11/12/2009	2
CERI	Lovelace	EE2	st12	4/7/2010	1
CERI	Lovelace	EE2	st12	4-7-2010_2	1
CERI	Lovelace	EE2	st12	4-7-2010_3	1 (10% rule, No change classification)
CERI	Lovelace	EE2	st12	9/23/2009	1
CERI	Lovelace	EE2	st2	2-27-2009T	1 (10% rule, No change classification)
CERI	Lovelace	EE2	st2	5/4/2009	1 (10% rule,

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

					No change classification)
CERI	Lovelace	EE2	st2	5/5/2009	1 (10% rule, No change classification)
CERI	Lovelace	EE2	st2	5-6-2009T	1 (10% rule, No change classification)
CERI	Lovelace	EE2	st3	7/10/2009	2
CERI	Lovelace	NE-TC	st3	6/1/2009	2
CERI	Lovelace	NE-TC	st3	6/4/2009	2
CERI	Lovelace	NE-TC	st3	6/8/2009	2
CERI	Missouri	DBP	st1	4001	0
CERI	Missouri	DBP	st1	4001 2m	0
CERI	Missouri	DBP	st1	4002	0
CERI	Missouri	DBP	st1	4003	0
CERI	Missouri	DBP	st1	4005	0
CERI	Missouri	DBP	st1	4006	0
CERI	Missouri	DBP	st1	4007	0
CERI	Missouri	DBP	st1	5003	0
CERI	Missouri	DBP	st1	5007	0
CERI	Missouri	DBP	st1	5010	0
CERI	Missouri	DBP	st2	5006	1
CERI	Missouri	DBP	st2	5008	0
CERI	Missouri	DBP	st2	5009	0
CERI	Missouri	DBP	st3	6005	0
CERI	Missouri	DBP	st3	6006	0
CERI	Missouri	DBP	st3	6007	0
CERI	Missouri	DBP	st3	6009	0
CERI	Missouri	DBP	st3	6010	0
CERI	Missouri	DBP	st3	6011	0
CERI	Missouri	DBP	st3	6502	0
CERI	Missouri	DBP	st3	6503	0
CERI	Missouri	DBP	st3	6504	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	DBP	st4	2206	1
CERI	Missouri	DBP	st4	2210	0
CERI	Missouri	DBP	st4	2211	0
CERI	Missouri	DBP	st4	2301	0
CERI	Missouri	DBP	st4	2302	0
CERI	Missouri	DBP	st4	2305	0
CERI	Missouri	ButylPar	st2	5006	2
CERI	Missouri	ButylPar	st2	5008	2
CERI	Missouri	ButylPar	st2	5009	2
CERI	Missouri	Cort	st2	5006	1 (10% rule, No change classification)
CERI	Missouri	Cort	st2	5008	0
CERI	Missouri	Cort	st2	5009	0
CERI	Missouri	Equol	st2	5006	2
CERI	Missouri	Equol	st2	5008	2
CERI	Missouri	Equol	st2	5009	2
CERI	Missouri	Hexestrol	st2	5006	2
CERI	Missouri	Hexestrol	st2	5008	2
CERI	Missouri	Hexestrol	st2	5009	2
CERI	Missouri	NPhenol	st2	5006	2
CERI	Missouri	NPhenol	st2	5008	2
CERI	Missouri	NPhenol	st2	5009	2
CERI	Missouri	DDT	st2	5006	2
CERI	Missouri	DDT	st2	5008	2
CERI	Missouri	DDT	st2	5009	2
CERI	Missouri	DES	st2	5006	2
CERI	Missouri	DES	st2	5008	2
CERI	Missouri	DES	st2	5009	2
CERI	Missouri	Gen	st2	5006	2 (10% rule, No change classification)
CERI	Missouri	Gen	st2	5008	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	Gen	st2	5009	1 (10% rule, No change classification)
CERI	Missouri	E2-TC	st3	6005	2
CERI	Missouri	E2-TC	st3	6006	± 2 (10% rule, Reclassification to 2)
CERI	Missouri	E2-TC	st3	6007	± 2 (10% rule, Reclassification to 2)
CERI	Missouri	NE-TC	st3	6005	2
CERI	Missouri	NE-TC	st3	6006	2
CERI	Missouri	NE-TC	st3	6007	2
CERI	Missouri	DBP-TC	st3	6005	0
CERI	Missouri	DBP-TC	st3	6006	0
CERI	Missouri	DBP-TC	st3	6007	0
CERI	Missouri	Zear	st3	6005	2
CERI	Missouri	Zear	st3	6006	2
CERI	Missouri	Zear	st3	6007	2
CERI	Missouri	Tamox	st3	6005	2
CERI	Missouri	Tamox	st3	6006	2
CERI	Missouri	Tamox	st3	6007	± 2 (10% rule, Reclassification to 2)
CERI	Missouri	DHT	st3	6005	2
CERI	Missouri	DHT	st3	6006	1
CERI	Missouri	DHT	st3	6007	1
CERI	Missouri	BPA	st3	6005	2
CERI	Missouri	BPA	st3	6006	2
CERI	Missouri	BPA	st3	6007	2
CERI	Missouri	Heptylphenol	st3	6009	1
CERI	Missouri	Heptylphenol	st3	6010	2
CERI	Missouri	Heptylphenol	st3	6011	0
CERI	Missouri	Heptylphenol	st3	6502	1 (10% Rule, No change in classification)
CERI	Missouri	Heptylphenol	st3	6503	1

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	Heptylphenol	st3	6504	1
CERI	Missouri	Kepone	st3	6009	2
CERI	Missouri	Kepone	st3	6010	2
CERI	Missouri	Kepone	st3	6011	2
CERI	Missouri	Kepone	st3	6502	2
CERI	Missouri	Kepone	st3	6503	2
CERI	Missouri	Kepone	st3	6504	2
CERI	Missouri	BaA	st3	6009	0
CERI	Missouri	BaA	st3	6010	0
CERI	Missouri	BaA	st3	6011	0
CERI	Missouri	BaA	st3	6502	0
CERI	Missouri	BaA	st3	6503	0
CERI	Missouri	BaA	st3	6504	0
CERI	Missouri	ELactone	st3	6009	1
CERI	Missouri	ELactone	st3	6010	1
CERI	Missouri	ELactone	st3	6011	0
CERI	Missouri	ELactone	st3	6502	0
CERI	Missouri	ELactone	st3	6503	1
CERI	Missouri	ELactone	st3	6504	1
CERI	Missouri	Progesterone	st3	6009	0
CERI	Missouri	Progesterone	st3	6010	0
CERI	Missouri	Progesterone	st3	6011	0
CERI	Missouri	Progesterone	st3	6502	0
CERI	Missouri	Progesterone	st3	6503	0
CERI	Missouri	Progesterone	st3	6504	0
CERI	Missouri	OTES	st3	6009	0
CERI	Missouri	OTES	st3	6010	0
CERI	Missouri	OTES	st3	6011	0
CERI	Missouri	OTES	st3	6502	0
CERI	Missouri	OTES	st3	6503	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	OTES	st3	6504	0
CERI	Missouri	Atr	st3	6009	0
CERI	Missouri	Atr	st3	6010	0
CERI	Missouri	Atr	st3	6011	0
CERI	Missouri	Atr	st3	6502	0
CERI	Missouri	Atr	st3	6503	0
CERI	Missouri	Atr	st3	6504	0
CERI	Missouri	Cort-1	st4	2206	0
CERI	Missouri	Cort-1	st4	2210	0
CERI	Missouri	Cort-1	st4	2211	0
CERI	Missouri	Dex-1	st4	2206	0
CERI	Missouri	Dex-1	st4	2210	1
CERI	Missouri	Dex-1	st4	2211	0
CERI	Missouri	Nethdrone-1	st4	2206	2
CERI	Missouri	Nethdrone-1	st4	2210	2
CERI	Missouri	Nethdrone-1	st4	2211	2
CERI	Missouri	HPTE-1	st4	2206	2
CERI	Missouri	HPTE-1	st4	2210	2
CERI	Missouri	HPTE-1	st4	2211	2
CERI	Missouri	Gen-1	st4	2206	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	Gen-1	st4	2210	2
CERI	Missouri	Gen-1	st4	2211	±2 (10% rule, Reclassified as 2)
CERI	Missouri	BPA-1	st4	2206	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	BPA-1	st4	2210	2
CERI	Missouri	BPA-1	st4	2211	2
CERI	Missouri	OTES-1	st4	2206	0
CERI	Missouri	OTES-1	st4	2210	0
CERI	Missouri	OTES-1	st4	2211	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	Nethdrone-2	st4	2206	2
CERI	Missouri	Nethdrone-2	st4	2210	2
CERI	Missouri	Nethdrone-2	st4	2211	2
CERI	Missouri	BPA-2	st4	2301	2
CERI	Missouri	BPA-2	st4	2302	2
CERI	Missouri	BPA-2	st4	2305	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	Dex-2	st4	2301	1
CERI	Missouri	Dex-2	st4	2302	0
CERI	Missouri	Dex-2	st4	2305	0
CERI	Missouri	Nethdrone-3	st4	2301	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	Nethdrone-3	st4	2302	2
CERI	Missouri	Nethdrone-3	st4	2305	±2 (10% rule, Reclassified as 2)
CERI	Missouri	Cort-2	st4	2301	0
CERI	Missouri	Cort-2	st4	2302	0
CERI	Missouri	Cort-2	st4	2305	0
CERI	Missouri	HPTE-2	st4	2301	2
CERI	Missouri	HPTE-2	st4	2302	2
CERI	Missouri	HPTE-2	st4	2305	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	OTES-2	st4	2301	1 (10% rule, No change in Classification
CERI	Missouri	OTES-2	st4	2302	0
CERI	Missouri	OTES-2	st4	2305	1
CERI	Missouri	Nethdrone-4	st4	2301	2
CERI	Missouri	Nethdrone-4	st4	2302	2
CERI	Missouri	Nethdrone-4	st4	2305	±2 (10% rule, Reclassified as 2)
CERI	Missouri	Gen-2	st4	2301	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	Gen-2	st4	2302	± 2 (10% rule, Reclassified as 2)

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

CERI	Missouri	Gen-2	st4	2305	± 2 (10% rule, Reclassified as 2)
CERI	Missouri	EE2	st2	5006	2
CERI	Missouri	EE2	st2	5008	2
CERI	Missouri	EE2	st2	5009	2

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

Table B-6.² FWA, Test Chemical Binding Classifications by Individual Test Run, Based on Acceptable and Testable Runs. Binder (=2), Equivocal (=1), Non-Binder (=0)

Protocol	Laboratory	Chemical	SubTask	Test	Individual Run Classification Vote
FWA	Ceetox	Atr	st3	20090505chem14	0 (10% rule used, no change in classification)
FWA	Ceetox	Atr	st3	20090418B	0
FWA	Ceetox	Atr	st3	20090418B	1
FWA	Ceetox	BPA	st3	20090418	2
FWA	Ceetox	BPA	st3	20090505	2
FWA	Ceetox	BPA	st4	20090914	± 2 (10% rule, Reanalyzed and new classification of 2)
FWA	Ceetox	BPA	st4	20090914	2
FWA	Ceetox	BPA	st4	20090917A	2
FWA	Ceetox	BPA	st4	20090911A	2
FWA	Ceetox	BPA	st4	20090911A	2
FWA	Ceetox	BaA_DMSO	st3	20090514DMSO	0
FWA	Ceetox	BaA_DMSO	st3	20090418DMSO	1
FWA	Ceetox	BaA_DMSO	st3	20090505DMSO	± (10% rule, too few points for classification, Run deleted)
FWA	Ceetox	ButylPar	st2	20090223	2
FWA	Ceetox	ButylPar	st2	20090307	2
FWA	Ceetox	ButylPar	st2	20090326	2
FWA	Ceetox	Cort	st2	20090223	0
FWA	Ceetox	Cort	st2	20090326	0
FWA	Ceetox	Cort	st2	20090307	0
FWA	Ceetox	Cort_b	st4	20090914	0
FWA	Ceetox	Cort_b	st4	20090914	0

² Table B-6 has been updated to indicate particular equivocal runs that were reanalyzed using the 10% Rule and new classification as described on pages 1-4 and Table C-1.

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Ceetox	Cort_b	st4	20090911A	0
FWA	Ceetox	Cort_b	st4	20090917A	0
FWA	Ceetox	Cort_b	st4	20090917A	0
FWA	Ceetox	Cort_b	st4	20090911A	0
FWA	Ceetox	DBP	st1	Run20081218	1
FWA	Ceetox	DBP	st2	Run20090326	0
FWA	Ceetox	DBP	st2	Run20090223	0
FWA	Ceetox	DBP	st2	Run20090307	0
FWA	Ceetox	DBP	st3	Run20090418	0
FWA	Ceetox	DBP	st3	Run20090514 DMSO	0
FWA	Ceetox	DBP	st3	Run20090505	0
FWA	Ceetox	DBP	st3	Run20090505 DMSO	0
FWA	Ceetox	DBP	st3	Run20090418 DMSO	0
FWA	Ceetox	DBP	st4	Run20090917A	0
FWA	Ceetox	DBP	st4	Run20090911A	0
FWA	Ceetox	DBP	st4	Run20090914A	0
FWA	Ceetox	DBP-TC	st3	20090505	1
FWA	Ceetox	DBP-TC	st3	20090418	0
FWA	Ceetox	DDT	st2	20090307	2
FWA	Ceetox	DDT	st2	20090223	2
FWA	Ceetox	DDT	st2	20090326	2
FWA	Ceetox	DES	st2	20090223	2
FWA	Ceetox	DES	st2	20090307	2
FWA	Ceetox	DES	st2	20090326	2
FWA	Ceetox	DHT	st3	20090505	2
FWA	Ceetox	DHT	st3	20090418	2
FWA	Ceetox	Dex	st4	20090917A	0
FWA	Ceetox	Dex	st4	20090914	0
FWA	Ceetox	Dex	st4	20090911A	0
FWA	Ceetox	Dex	st4	20090914	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Ceetox	Dex	st4	20090917A	0
FWA	Ceetox	Dex	st4	20090911A	0
FWA	Ceetox	E2-TC	st3	20090418	2
FWA	Ceetox	E2-TC	st3	20090505	2
FWA	Ceetox	EE2	st2	20090307	2
FWA	Ceetox	EE2	st2	20090326	2
FWA	Ceetox	EE2	st2	20090223	2
FWA	Ceetox	ELactone	st3	20090505	2
FWA	Ceetox	ELactone	st3	20090418	2
FWA	Ceetox	Equol	st2	20090326	2
FWA	Ceetox	Equol	st2	20090223	2
FWA	Ceetox	Equol	st2	20090307	2
FWA	Ceetox	Gen	st2	20090326	2
FWA	Ceetox	Gen	st2	20090307	2
FWA	Ceetox	Gen	st2	20090223	2
FWA	Ceetox	Gen_b	st4	20090917A	2
FWA	Ceetox	Gen_b	st4	20090911A	2
FWA	Ceetox	Gen_b	st4	20090914	2
FWA	Ceetox	Gen_b	st4	20090911B	2
FWA	Ceetox	Gen_b	st4	20090917B	2
FWA	Ceetox	Gen_b	st4	20090914B	2
FWA	Ceetox	HPTE	st4	20090914B	2
FWA	Ceetox	HPTE	st4	20090911A	2
FWA	Ceetox	HPTE	st4	20090917B	2
FWA	Ceetox	HPTE	st4	20090917A	2
FWA	Ceetox	HPTE	st4	20090914	2
FWA	Ceetox	HPTE	st4	20090911A	2
FWA	Ceetox	Heptylphenol	st3	20090418	1
FWA	Ceetox	Heptylphenol	st3	20090505	2
FWA	Ceetox	Hexestrol	st2	20090307	2

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Ceetox	Hexestrol	st2	20090223	2
FWA	Ceetox	Hexestrol	st2	20090326	2
FWA	Ceetox	Kepone	st3	20090505	2
FWA	Ceetox	Kepone	st3	20090418	2
FWA	Ceetox	NE-TC	st3	20090418	2
FWA	Ceetox	NE-TC	st3	20090505	2
FWA	Ceetox	NPhenol	st2	20090223	2
FWA	Ceetox	NPhenol	st2	20090326	2
FWA	Ceetox	NPhenol	st2	20090307	2
FWA	Ceetox	Nethdrone	st4	20090914	2
FWA	Ceetox	Nethdrone	st4	20090917A	1
FWA	Ceetox	Nethdrone	st4	20090914	2
FWA	Ceetox	Nethdrone	st4	20090917B	2
FWA	Ceetox	Nethdrone	st4	20090917A	2
FWA	Ceetox	Nethdrone	st4	20090914	2
FWA	Ceetox	Nethdrone	st4	20090911B	2
FWA	Ceetox	Nethdrone	st4	20090917A	2
FWA	Ceetox	Nethdrone	st4	20090911A	2
FWA	Ceetox	Nethdrone	st4	20090911A	2
FWA	Ceetox	Nethdrone	st4	20090914B	2
FWA	Ceetox	Nethdrone	st4	20090911A	2
FWA	Ceetox	OTES	st3	20090505	0
FWA	Ceetox	OTES	st3	20090418	1 (10% rule, No change in classification)
FWA	Ceetox	OTES	st4	20090911A	0
FWA	Ceetox	OTES	st4	20090917A	0
FWA	Ceetox	OTES	st4	20090914B	0
FWA	Ceetox	OTES	st4	20090917B	0
FWA	Ceetox	OTES	st4	20090914	0
FWA	Ceetox	OTES	st4	20090911B	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Ceetox	Progesterone	st3	20090418	± (10% rule, too few points for classification, Run deleted)
FWA	Ceetox	Progesterone	st3	20090505	0
FWA	Ceetox	Tamox	st3	20090505	2
FWA	Ceetox	Tamox	st3	20090418	2
FWA	Ceetox	Zear	st3	20090505	2
FWA	Dietrich	Atr	st3	Assay10_1	1
FWA	Dietrich	Atr	st3	Assay12_1	± (10% rule, too few points for classification, Run deleted)
FWA	Dietrich	Atr	st3	Assay14_1	0
FWA	Dietrich	Atr	st3	Assay13	± (10% rule, too few points for classification, Run deleted)
FWA	Dietrich	BPA	st3	Assay09	2
FWA	Dietrich	BaA_Ethol	st3	Assay12_1	0
FWA	Dietrich	BaA_Ethol	st3	Assay13	0
FWA	Dietrich	BaA_Ethol	st3	Assay11	0
FWA	Dietrich	BaA_Ethol	st3	Assay10_1	± (10% rule, too few points for classification, Run deleted)
FWA	Dietrich	ButylPar	st2	Assay06	1 (10% rule, No change in classification)
FWA	Dietrich	ButylPar	st2	Assay16	2
FWA	Dietrich	ButylPar	st3	Assay09	2
FWA	Dietrich	Cort	st2	Assay06	1
FWA	Dietrich	Cort	st2	Assay16	1 (10% rule, No change in classification)
FWA	Dietrich	Cort_b	st3	Assay11	0
FWA	Dietrich	Cort_b	st3	Assay10_1	0
FWA	Dietrich	Cort_b	st3	Assay12_1	1 (10% rule, No change in classification)
FWA	Dietrich	Cort_b	st3	Assay13	0
FWA	Dietrich	DBP	st1	Assay03	1 (10% rule, No change in classification)

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Dietrich	DBP	st2	Assay04	0
FWA	Dietrich	DBP	st2	Assay06	0
FWA	Dietrich	DBP	st2	Assay05	0
FWA	Dietrich	DBP	st3	Assay15	0
FWA	Dietrich	DBP	st3	Assay11	0
FWA	Dietrich	DBP	st3	Assay09	0
FWA	Dietrich	DBP	st3	Assay13	0
FWA	Dietrich	DBP	st3	Assay10_1	0
FWA	Dietrich	DBP	st3	Assay12_1	0
FWA	Dietrich	DBP	st3	Assay14_1	0
FWA	Dietrich	DBP-TC	st3	Assay09	1
FWA	Dietrich	DDT	st2	Assay04	1
FWA	Dietrich	DDT	st2	Assay16	2
FWA	Dietrich	DDT	st3	Assay14_1	2
FWA	Dietrich	DDT	st3	Assay12_2	2
FWA	Dietrich	DDT	st3	Assay10_2	1
FWA	Dietrich	DDT	st3	Assay16 (III)	2
FWA	Dietrich	DDT	st3	Assay15 (III)	2
FWA	Dietrich	DES	st2	Assay06	2
FWA	Dietrich	DES	st2	Assay16	1
FWA	Dietrich	DES	st3	Assay12_1	2
FWA	Dietrich	DES	st3	Assay13	2
FWA	Dietrich	DES	st3	Assay14_1	2
FWA	Dietrich	DES	st3	Assay10_1	1
FWA	Dietrich	DHT	st3	Assay14_1	2
FWA	Dietrich	DHT	st3	Assay12_1	2
FWA	Dietrich	DHT	st3	Assay13	2
FWA	Dietrich	DHT	st3	Assay10_1	1
FWA	Dietrich	Dex	st3	Assay12_2	1 (10% rule, No change in classification)

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

FWA	Dietrich	Dex	st3	Assay10_2	1 (10% rule, No change in classification)
FWA	Dietrich	Dex	st3	Assay15 (III)	~~1~~ (10% rule, too few points for classification, Run deleted)
FWA	Dietrich	Dex	st3	Assay14_2	0
FWA	Dietrich	E2-TC	st3	Assay14_1	2
FWA	Dietrich	E2-TC	st3	Assay12_1	2
FWA	Dietrich	E2-TC	st3	Assay10_1	1 (10% rule, No change in classification)
FWA	Dietrich	E2-TC	st3	Assay13	2
FWA	Dietrich	EE2	st2	Assay16	1
FWA	Dietrich	EE2	st2	Assay06	2
FWA	Dietrich	EE2	st3	Assay15 (III)	2
FWA	Dietrich	EE2	st3	Assay16 (III)	2
FWA	Dietrich	EE2	st3	Assay10_2	1
FWA	Dietrich	EE2	st3	Assay14_1	2
FWA	Dietrich	EE2	st3	Assay12_2	1
FWA	Dietrich	ELactone	st3	Assay09	2
FWA	Dietrich	Equol	st2	Assay04	2
FWA	Dietrich	Equol	st2	Assay06	2
FWA	Dietrich	Equol	st3	Assay09	2
FWA	Dietrich	Gen	st2	Assay05	2
FWA	Dietrich	Gen	st2	Assay04	2
FWA	Dietrich	Gen	st2	Assay06	2
FWA	Dietrich	Gen	st3	Assay13	2
FWA	Dietrich	Gen	st3	Assay14_1	2
FWA	Dietrich	Gen	st3	Assay10_1	0
FWA	Dietrich	Gen	st3	Assay12_1	2
FWA	Dietrich	HPTE	st3	Assay09	2
FWA	Dietrich	Heptylphenol	st3	Assay10_1	2
FWA	Dietrich	Heptylphenol	st3	Assay12_1	2

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Dietrich	Heptylphenol	st3	Assay13	2
FWA	Dietrich	Hexestrol	st2	Assay05	2
FWA	Dietrich	Hexestrol	st2	Assay06	2
FWA	Dietrich	Hexestrol	st2	Assay04	2
FWA	Dietrich	Hexestrol	st3	Assay13	2
FWA	Dietrich	Hexestrol	st3	Assay10_1	2
FWA	Dietrich	Hexestrol	st3	Assay12_1	2
FWA	Dietrich	Hexestrol	st3	Assay11	2
FWA	Dietrich	Kepone	st3	Assay10_2	1
FWA	Dietrich	Kepone	st3	Assay14_1	2
FWA	Dietrich	Kepone	st3	Assay12_2	1
FWA	Dietrich	Kepone	st3	Assay16 (III)	2
FWA	Dietrich	Kepone	st3	Assay15 (III)	2
FWA	Dietrich	NE-TC	st3	Assay12_1	2
FWA	Dietrich	NE-TC	st3	Assay14_1	1
FWA	Dietrich	NE-TC	st3	Assay13	2
FWA	Dietrich	NE-TC	st3	Assay10_1	1
FWA	Dietrich	NPhenol	st2	Assay16	2
FWA	Dietrich	NPhenol	st2	Assay06	2
FWA	Dietrich	NPhenol	st3	Assay10_1	1
FWA	Dietrich	NPhenol	st3	Assay12_1	2
FWA	Dietrich	NPhenol	st3	Assay13	2
FWA	Dietrich	NPhenol	st3	Assay14_1	2
FWA	Dietrich	Nethdrone	st3	Assay12_1	2
FWA	Dietrich	Nethdrone	st3	Assay10_1	1
FWA	Dietrich	Nethdrone	st3	Assay13	2
FWA	Dietrich	Nethdrone	st3	Assay14_1	2
FWA	Dietrich	OTES	st3	Assay09	0
FWA	Dietrich	Progesterone	st3	Assay09	0
FWA	Dietrich	Tamox	st3	Assay12_2	2

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Dietrich	Tamox	st3	Assay10_2	1 (10% rule, No change in classification)
FWA	Dietrich	Tamox	st3	Assay13_2	2
FWA	Dietrich	Tamox	st3	Assay14_1	2
FWA	Dietrich	Zear	st3	Assay09	2
FWA	Freyberger	Atr	st3	Code A1	0
FWA	Freyberger	Atr	st3	Code AB	0
FWA	Freyberger	Atr	st3	Code A	0
FWA	Freyberger	BPA	st3	Code B	2
FWA	Freyberger	BPA	st3	Code B2	2
FWA	Freyberger	BaA_Ethol	st3	Code AB	0
FWA	Freyberger	BaA_Ethol	st3	Code A	0
FWA	Freyberger	BaA_Ethol	st3	Code A1	0
FWA	Freyberger	ButylPar	st2	D	2
FWA	Freyberger	ButylPar	st2	B	2
FWA	Freyberger	ButylPar	st2	A	2
FWA	Freyberger	Cort	st2	B	0
FWA	Freyberger	Cort	st2	F	0
FWA	Freyberger	Cort	st2	D	0
FWA	Freyberger	Cort	st2	E	0
FWA	Freyberger	Cort	st2	G	0
FWA	Freyberger	Cort	st2	A	0
FWA	Freyberger	DBP	st2	E	0
FWA	Freyberger	DBP	st2	F	0
FWA	Freyberger	DBP	st2	D	0
FWA	Freyberger	DBP	st2	B	0
FWA	Freyberger	DBP	st2	A	0
FWA	Freyberger	DBP	st2	G	0
FWA	Freyberger	DBP	st3	Code AB	0
FWA	Freyberger	DBP	st3	Code A	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Freyberger	DBP	st3	Code B2	±(10% rule, too few points for classification, Run deleted)
FWA	Freyberger	DBP	st3	Code B	0
FWA	Freyberger	DBP	st3	Code A1	0
FWA	Freyberger	DBP-TC	st3	Code A1	1
FWA	Freyberger	DBP-TC	st3	Code A	0
FWA	Freyberger	DDT	st2	G	2
FWA	Freyberger	DDT	st2	F	2
FWA	Freyberger	DDT	st2	E	2
FWA	Freyberger	DDT	st2	A	2
FWA	Freyberger	DDT	st2	B	2
FWA	Freyberger	DDT	st2	D	2
FWA	Freyberger	DES	st2	A	2
FWA	Freyberger	DES	st2	B	2
FWA	Freyberger	DES	st2	D	2
FWA	Freyberger	DHT	st3	Code A	2
FWA	Freyberger	DHT	st3	Code A1	2
FWA	Freyberger	DHT	st3	Code AB	2
FWA	Freyberger	E2-TC	st3	Code AB	1 (10% rule, No change in classification)
FWA	Freyberger	E2-TC	st3	Code B2	1 (10% rule, No change in classification)
FWA	Freyberger	E2-TC	st3	Code B	2
FWA	Freyberger	EE2	st2	A	2
FWA	Freyberger	EE2	st2	B	2
FWA	Freyberger	EE2	st2	D	2
FWA	Freyberger	ELactone	st3	Code B	1
FWA	Freyberger	ELactone	st3	Code B2	2
FWA	Freyberger	Equol	st2	D	2
FWA	Freyberger	Equol	st2	A	2
FWA	Freyberger	Equol	st2	B	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Freyberger	Gen	st2	E	2
FWA	Freyberger	Gen	st2	F	2
FWA	Freyberger	Gen	st2	G	2
FWA	Freyberger	Gen	st2	D	2
FWA	Freyberger	Gen	st2	B	1
FWA	Freyberger	Gen	st2	A	2
FWA	Freyberger	Heptylphenol	st3	Code AB	2
FWA	Freyberger	Heptylphenol	st3	Code A1	2
FWA	Freyberger	Heptylphenol	st3	Code A	2
FWA	Freyberger	Hexestrol	st2	A	2
FWA	Freyberger	Hexestrol	st2	B	2
FWA	Freyberger	Hexestrol	st2	D	2
FWA	Freyberger	Kepone	st3	Code B	2
FWA	Freyberger	Kepone	st3	Code B2	2
FWA	Freyberger	NE-TC	st3	Code A1	2
FWA	Freyberger	NE-TC	st3	Code A	2
FWA	Freyberger	NE-TC	st3	Code AB	2
FWA	Freyberger	NPhenol	st2	D	2
FWA	Freyberger	NPhenol	st2	A	2
FWA	Freyberger	NPhenol	st2	B	2
FWA	Freyberger	OTES	st3	Code B	0
FWA	Freyberger	OTES	st3	Code B2	0
FWA	Freyberger	OTES	st3	Code AB	0
FWA	Freyberger	Progesterone	st3	Code A	0
FWA	Freyberger	Progesterone	st3	Code A1	0
FWA	Freyberger	Tamox	st3	Code B	2
FWA	Freyberger	Tamox	st3	Code B2	2
FWA	Freyberger	Zear	st3	Code A1	1 (10% rule, No change in Classification)
FWA	Freyberger	Zear	st3	Code AB	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Freyberger	Zear	st3	Code A	2
FWA	JapanCERI	Atr	st3	91110	0
FWA	JapanCERI	Atr	st3	91112	0
FWA	JapanCERI	Atr	st3	91117	0
FWA	JapanCERI	Atr	st3	91118	0
FWA	JapanCERI	BPA	st3	91116	2
FWA	JapanCERI	BPA	st3	91119	2
FWA	JapanCERI	BPA	st3	91021	2
FWA	JapanCERI	BaA_DMSO	st3	91118	0
FWA	JapanCERI	BaA_DMSO	st3	91117	0
FWA	JapanCERI	BaA_DMSO	st3	91112	0
FWA	JapanCERI	BaA_DMSO	st3	91110	1 (10% rule, No change in classification)
FWA	JapanCERI	ButylPar	st2	20090430	2
FWA	JapanCERI	ButylPar	st2	20090427	2
FWA	JapanCERI	ButylPar	st2	20090422	2
FWA	JapanCERI	Cort	st2	20090422	0
FWA	JapanCERI	Cort	st2	20090427	0
FWA	JapanCERI	Cort	st2	20090430	0
FWA	JapanCERI	DBP	st1	20090121	0
FWA	JapanCERI	DBP	st1	20090128	0
FWA	JapanCERI	DBP	st1	20090113	0
FWA	JapanCERI	DBP	st2	20090422	0
FWA	JapanCERI	DBP	st2	20090427	0
FWA	JapanCERI	DBP	st2	20090430	0
FWA	JapanCERI	DBP	st3	91105	0
FWA	JapanCERI	DBP	st3	91109	0
FWA	JapanCERI	DBP	st3	91119	0
FWA	JapanCERI	DBP	st3	91117	0
FWA	JapanCERI	DBP	st3	91112	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	JapanCERI	DBP	st3	91118	0
FWA	JapanCERI	DBP	st3	91116	0
FWA	JapanCERI	DBP	st3	91111	0
FWA	JapanCERI	DBP	st3	91110	0
FWA	JapanCERI	DBP	st3	91021	0
FWA	JapanCERI	DBP-TC	st3	91116	1
FWA	JapanCERI	DBP-TC	st3	91021	1
FWA	JapanCERI	DDT	st2	20090430	2
FWA	JapanCERI	DDT	st2	20090427	2
FWA	JapanCERI	DDT	st2	20090422	2
FWA	JapanCERI	DES	st2	20090427	2
FWA	JapanCERI	DES	st2	20090430	2
FWA	JapanCERI	DES	st2	20090422	2
FWA	JapanCERI	DHT	st3	91021	2
FWA	JapanCERI	DHT	st3	91116	2
FWA	JapanCERI	E2-TC	st3	91118	2
FWA	JapanCERI	E2-TC	st3	91110	1
FWA	JapanCERI	E2-TC	st3	91109	2
FWA	JapanCERI	E2-TC	st3	91111	2
FWA	JapanCERI	E2-TC	st3	91117	2
FWA	JapanCERI	E2-TC	st3	91112	2
FWA	JapanCERI	EE2	st2	20090427	2
FWA	JapanCERI	EE2	st2	20090430	2
FWA	JapanCERI	EE2	st2	20090422	2
FWA	JapanCERI	ELactone	st3	91109	2
FWA	JapanCERI	ELactone	st3	91105	2
FWA	JapanCERI	ELactone	st3	91111	2
FWA	JapanCERI	Equol	st2	20090427	2
FWA	JapanCERI	Equol	st2	20090430	2
FWA	JapanCERI	Equol	st2	20090422	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	JapanCERI	Gen	st2	20090427	2
FWA	JapanCERI	Gen	st2	20090422	2
FWA	JapanCERI	Gen	st2	20090430	2
FWA	JapanCERI	Heptylphenol	st3	91021	2
FWA	JapanCERI	Heptylphenol	st3	91116	2
FWA	JapanCERI	Heptylphenol	st3	91119	2
FWA	JapanCERI	Hexestrol	st2	20090427	2
FWA	JapanCERI	Hexestrol	st2	20090430	2
FWA	JapanCERI	Hexestrol	st2	20090422	2
FWA	JapanCERI	Kepone	st3	91021	2
FWA	JapanCERI	Kepone	st3	91116	2
FWA	JapanCERI	NE-TC	st3	91105	2
FWA	JapanCERI	NE-TC	st3	91111	2
FWA	JapanCERI	NE-TC	st3	91109	2
FWA	JapanCERI	NPhenol	st2	20090422	2
FWA	JapanCERI	NPhenol	st2	20090427	2
FWA	JapanCERI	NPhenol	st2	20090430	2
FWA	JapanCERI	OTES	st3	91109	0
FWA	JapanCERI	OTES	st3	91111	0
FWA	JapanCERI	OTES	st3	91105	0
FWA	JapanCERI	OTES	st3	91119	0
FWA	JapanCERI	OTES	st3	91116	0
FWA	JapanCERI	Progesterone	st3	91105	0
FWA	JapanCERI	Progesterone	st3	91021	1 (10% rule, No change in classification)
FWA	JapanCERI	Progesterone	st3	91111	0
FWA	JapanCERI	Progesterone	st3	91109	0
FWA	JapanCERI	Tamox	st3	91105	2
FWA	JapanCERI	Tamox	st3	91116	2
FWA	JapanCERI	Tamox	st3	91021	2

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

FWA	JapanCERi	Zear	st3	91116	2
FWA	JapanCERi	Zear	st3	91021	2
FWA	JapanCERi	Zear	st3	91109	2
FWA	JapanCERi	Zear	st3	91105	2
FWA	Lovelace	Atr	st12	Run09July10 EtOH_Buffer	0
FWA	Lovelace	BPA	st3	30Jun09EtOH	2
FWA	Lovelace	ButylPar	st2	24Feb09EtOH	2
FWA	Lovelace	ButylPar	st2	01May09EtOH	2
FWA	Lovelace	Cort	st2	17Feb09DMSO	2
FWA	Lovelace	DBP	st12	Run06Oct09 EtOH	0
FWA	Lovelace	DBP	st12	Run09July10 EtOH_Buffer	0
FWA	Lovelace	DBP	st2	Run24Feb09EtOH	~~1~~—(10% rule, too few points for classification, Run deleted)
FWA	Lovelace	DBP	st2	Run17Feb09DMSO	0
FWA	Lovelace	DBP	st3	Run19Jun09EtOH	0
FWA	Lovelace	DBP	st3	Run30Jun09EtOH	0
FWA	Lovelace	DBP-TC	st12	06Oct09EtOH_Buff	1
FWA	Lovelace	DBP-TC	st12	Run09July10 EtOH_Buffer	2
FWA	Lovelace	DDT	st2	24Feb09EtOH	2
FWA	Lovelace	DES	st2	24Feb09EtOH	2
FWA	Lovelace	DES	st2	01May09EtOH	2
FWA	Lovelace	DHT	st3	30Jun09EtOH	2
FWA	Lovelace	E2-TC	st12	06Oct09EtOH_Buff	1
FWA	Lovelace	E2-TC	st12	Run09July10 EtOH_Buffer	2
FWA	Lovelace	E2-TC	st3	30Jun09EtOH	2
FWA	Lovelace	EE2	st2	17Feb09DMSO	2
FWA	Lovelace	EE2_b	st12	06Oct09EtOH_Buff	1
FWA	Lovelace	EE2_b	st12	Run09July10 EtOH_Buffer	2
FWA	Lovelace	Gen	st2	17Feb09DMSO	2
FWA	Lovelace	Gen	st2	01May09EtOH	2

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Lovelace	Heptylphenol	st12	Run09July10 EtOH_Buffer	2
FWA	Lovelace	Heptylphenol	st3	30Jun09EtOH	2
FWA	Lovelace	Hexestrol	st2	01May09EtOH	2
FWA	Lovelace	Hexestrol	st2	17Feb09DMSO	2
FWA	Lovelace	Kepone	st12	Run09July10 EtOH_Buffer	2
FWA	Lovelace	Kepone	st3	30Jun09EtOH	2
FWA	Lovelace	NE-TC	st3	30Jun09EtOH	2
FWA	Lovelace	NPhenol	st2	24Feb09EtOH	2
FWA	Lovelace	Progesterone	st12	Run09July10 EtOH_Buffer	2
FWA	Lovelace	Progesterone	st3	30Jun09EtOH	2
FWA	Lovelace	Tamox	st3	30Jun09EtOH	2
FWA	Lovelace	Zear	st3	30Jun09EtOH	2
FWA	Missouri	Atr	st3	8004	0
FWA	Missouri	Atr	st3	8005	0
FWA	Missouri	Atr	st3	8003	0
FWA	Missouri	BPA	st3	8101	2
FWA	Missouri	BPA	st3	8102	2
FWA	Missouri	BPA	st3	8107	2
FWA	Missouri	BPA	st4	1109	2
FWA	Missouri	BPA	st4	1108	2
FWA	Missouri	BPA	st4	1102	2
FWA	Missouri	BPA	st4	1107	2
FWA	Missouri	BPA	st4	1104	2
FWA	Missouri	BPA	st4	1106	2
FWA	Missouri	BPA	st4	1101	2
FWA	Missouri	BaA_DMSO	st3	8203	0
FWA	Missouri	BaA_DMSO	st3	8201	0
FWA	Missouri	BaA_Ethol	st3	8004	0
FWA	Missouri	BaA_Ethol	st3	8003	0
FWA	Missouri	ButylPar	st2	9003	2

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Missouri	ButylPar	st2	9004	2
FWA	Missouri	ButylPar	st2	9005	2
FWA	Missouri	ButylPar	st2	9007	2
FWA	Missouri	Cort	st2	9007	0
FWA	Missouri	Cort	st2	9003	0
FWA	Missouri	Cort	st2	9005	0
FWA	Missouri	Cort	st2	9004	0
FWA	Missouri	Cort_b	st4	1109	0
FWA	Missouri	Cort_b	st4	1101	0
FWA	Missouri	Cort_b	st4	1104	0
FWA	Missouri	Cort_b	st4	1106	0
FWA	Missouri	Cort_b	st4	1108	0
FWA	Missouri	Cort_b	st4	1107	0
FWA	Missouri	Cort_b	st4	1103	1
FWA	Missouri	Cort_b	st4	1102	0
FWA	Missouri	DBP	st1	7004	0
FWA	Missouri	DBP	st1	7003	0
FWA	Missouri	DBP	st1	7006	0
FWA	Missouri	DBP	st1	7005	0
FWA	Missouri	DBP	st1	7007	0
FWA	Missouri	DBP	st2	9005	0
FWA	Missouri	DBP	st2	9004	0
FWA	Missouri	DBP	st2	9003	0
FWA	Missouri	DBP	st2	9007	0
FWA	Missouri	DBP	st3	8003	0
FWA	Missouri	DBP	st3	8101	0
FWA	Missouri	DBP	st3	8102	0
FWA	Missouri	DBP	st3	8107	0
FWA	Missouri	DBP	st3	8201	0
FWA	Missouri	DBP	st3	8005	0

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Missouri	DBP	st3	8203	0
FWA	Missouri	DBP	st3	8004	0
FWA	Missouri	DBP	st4	1109	0
FWA	Missouri	DBP	st4	1104	0
FWA	Missouri	DBP	st4	1107	0
FWA	Missouri	DBP	st4	1102	0
FWA	Missouri	DBP	st4	1108	0
FWA	Missouri	DBP	st4	1106	0
FWA	Missouri	DBP	st4	1101	0
FWA	Missouri	DBP	st4	1103	0
FWA	Missouri	DBP-TC	st3	8101	1
FWA	Missouri	DBP-TC	st3	8102	1
FWA	Missouri	DBP-TC	st3	8107	0
FWA	Missouri	DDT	st2	9007	2
FWA	Missouri	DDT	st2	9004	2
FWA	Missouri	DDT	st2	9003	2
FWA	Missouri	DDT	st2	9005	2
FWA	Missouri	DES	st2	9005	2
FWA	Missouri	DES	st2	9004	2
FWA	Missouri	DES	st2	9003	2
FWA	Missouri	DES	st2	9007	2
FWA	Missouri	DHT	st3	8102	2
FWA	Missouri	DHT	st3	8107	2
FWA	Missouri	DHT	st3	8101	2
FWA	Missouri	Dex	st4	1108	0
FWA	Missouri	Dex	st4	1104	0
FWA	Missouri	Dex	st4	1109	0
FWA	Missouri	Dex	st4	1106	0
FWA	Missouri	Dex	st4	1103	1
FWA	Missouri	Dex	st4	1107	0

Appendix H (Revisions, Tables B-5 CERl and B-6 FW)

FWA	Missouri	Dex	st4	1102	0
FWA	Missouri	Dex	st4	1101	0
FWA	Missouri	E2-TC	st3	8102	2
FWA	Missouri	E2-TC	st3	8107	2
FWA	Missouri	E2-TC	st3	8101	2
FWA	Missouri	EE2	st2	9004	2
FWA	Missouri	EE2	st2	9005	2
FWA	Missouri	EE2	st2	9007	2
FWA	Missouri	EE2	st2	9003	2
FWA	Missouri	ELactone	st3	8003	2
FWA	Missouri	ELactone	st3	8004	2
FWA	Missouri	Equol	st2	9004	2
FWA	Missouri	Equol	st2	9007	2
FWA	Missouri	Equol	st2	9005	2
FWA	Missouri	Equol	st2	9003	2
FWA	Missouri	Gen	st2	9007	2
FWA	Missouri	Gen	st2	9003	2
FWA	Missouri	Gen	st2	9005	2
FWA	Missouri	Gen	st2	9004	2
FWA	Missouri	GenW	st2	9004	2
FWA	Missouri	GenW	st2	9007	2
FWA	Missouri	GenW	st2	9003	2
FWA	Missouri	GenW	st2	9005	2
FWA	Missouri	Gen_b	st4	1101	2
FWA	Missouri	Gen_b	st4	1106	2
FWA	Missouri	Gen_b	st4	1109	1
FWA	Missouri	Gen_b	st4	1102	2
FWA	Missouri	Gen_b	st4	1108	2
FWA	Missouri	Gen_b	st4	1104	2
FWA	Missouri	Gen_b	st4	1107	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Missouri	HPTE	st4	1102	2
FWA	Missouri	HPTE	st4	1101	1
FWA	Missouri	HPTE	st4	1107	2
FWA	Missouri	HPTE	st4	1106	2
FWA	Missouri	HPTE	st4	1103	2
FWA	Missouri	HPTE	st4	1108	2
FWA	Missouri	HPTE	st4	1109	2
FWA	Missouri	HPTE	st4	1104	2
FWA	Missouri	Heptylphenol	st3	8004	0
FWA	Missouri	Heptylphenol	st3	8003	0
FWA	Missouri	Hexestrol	st2	9003	2
FWA	Missouri	Hexestrol	st2	9004	2
FWA	Missouri	Hexestrol	st2	9007	2
FWA	Missouri	Hexestrol	st2	9005	2
FWA	Missouri	Kepone	st3	8004	2
FWA	Missouri	Kepone	st3	8003	2
FWA	Missouri	NE-TC	st3	8107	2
FWA	Missouri	NE-TC	st3	8102	2
FWA	Missouri	NE-TC	st3	8101	2
FWA	Missouri	NPhenol	st2	9007	2
FWA	Missouri	NPhenol	st2	9004	2
FWA	Missouri	NPhenol	st2	9005	2
FWA	Missouri	NPhenol	st2	9003	2
FWA	Missouri	Nethdrone	st4	1101	2
FWA	Missouri	Nethdrone	st4	1108	2
FWA	Missouri	Nethdrone	st4	1102	2
FWA	Missouri	Nethdrone	st4	1108	2
FWA	Missouri	Nethdrone	st4	1106	2
FWA	Missouri	Nethdrone	st4	1106	2
FWA	Missouri	Nethdrone	st4	1103	2

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

FWA	Missouri	Nethdrone	st4	1102	2
FWA	Missouri	Nethdrone	st4	1109	2
FWA	Missouri	Nethdrone	st4	1104	2
FWA	Missouri	Nethdrone	st4	1109	2
FWA	Missouri	Nethdrone	st4	1104	2
FWA	Missouri	Nethdrone	st4	1107	2
FWA	Missouri	Nethdrone	st4	1107	2
FWA	Missouri	Nethdrone	st4	1101	2
FWA	Missouri	OTES	st3	8004	0
FWA	Missouri	OTES	st3	8003	0
FWA	Missouri	OTES	st3	8005	0
FWA	Missouri	OTES	st4	1107	0
FWA	Missouri	OTES	st4	1102	0
FWA	Missouri	OTES	st4	1109	0
FWA	Missouri	OTES	st4	1108	0
FWA	Missouri	OTES	st4	1101	0
FWA	Missouri	OTES	st4	1104	0
FWA	Missouri	OTES	st4	1106	0
FWA	Missouri	Progesterone	st3	8003	0
FWA	Missouri	Progesterone	st3	8004	0
FWA	Missouri	Progesterone	st3	8005	0
FWA	Missouri	Tamox	st3	8107	2
FWA	Missouri	Tamox	st3	8102	2
FWA	Missouri	Tamox	st3	8101	2
FWA	Missouri	Zear	st3	8101	2
FWA	Missouri	Zear	st3	8107	2
FWA	Missouri	Zear	st3	8102	2

Appendix C. Task 3. Equivocal Runs Subject to the 10% Rule. Recharacterization of Binding Status Following Application of the 10% Rule.

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Table C-1. CERI Protocol

Table C-2. FWA Protocol

Appendix H (Revisions, Tables B-5 CERi and B-6 FW)

Table C-1. CERi Protocol. Equivocal Runs (as Classified in 2011 Analysis) Subject to the 10% Rule. Concentration Level Affected by 10% Rule. Recharacterization of Binding Status Following Application of the 10% Rule: Interactive (2), Equivocal (1), Non-Interactive (0), Non-Testable (.).

Laboratory	Chemical	Sub Task	Test Run	Individual vote	Concentration Affected by 10% Rule	Prism Fits Following Application of the 10% Rule							
						Bottom (Estimate)	Top (Estimate)	Logic50 (Estimate)	Hillslope (Estimate)	Bottom (Std Error)	Top (Std Error)	LogIC ₅₀ (Std Error)	Hillslope (Std Error)
Ceetox	Dex-2	st4	20090930A	1	-3, -4								
Ceetox	Cort-2	st4	20090903A	1	-3	47.45	83.79			11.41	4.657		
Ceetox	Cort-2	st4	20090930A	1	-3, -4								
Ceetox	Gen-2	st4	20090930B	2	-3	8.983	86.62	-6.696	-1.235	1.796	1.459	0.04871	0.1516
Ceetox	EE2	st2	20090221	1	-3	6.707	91.1			2.153	3.893		
Freyberger	Cort	st2	B	1	-3								
Freyberger	Gen	st2	E	2	-3	-3.272	90.46	-5.894	-1.616	1.406	0.7093	0.02001	0.1987
Freyberger	Gen	st2	F	2	-3	0.07451	99.08	-5.887	-1.795	1.308	0.6924	0.02205	0.302
Freyberger	Gen	st2	G	2	-3	0.1623	100.5	-5.806	-1.629	1.731	0.868	0.02999	0.2265
Freyberger	E2-TC	st3	CODE A3	2	-3	-1.779	104.8	-9.043	-0.9496	0.6623	3.744	0.02179	0.08106
Lovelace	Equol	st2	2-27-2009T	1	-3.4								
Lovelace	Equol	st2	5-6-2009T	1	-3	4.075			-0.9937	4.771			0.6347
Lovelace	Hexestrol	st2	2-27-2009T	1	-3	24.18	58.67			6.313	5.902		
Lovelace	E2-TC	st12	4-7-2010_3	1	-4								
Lovelace	DHT	st3	6-11-2009T	2	-4.5	25.77	128.5	-5.97	-1.293	17.12	2.686	0.222	0.8214
Lovelace	EE2	st12	4-7-2010_3	1	-4								
Lovelace	EE2	st2	2-27-2009T	1	-9								
Lovelace	EE2	st2	5/4/2009	1	-4								
Lovelace	EE2	st2	5/5/2009	1	-4								
Lovelace	EE2	st2	5-6-2009T	1	-4	-3.413		-10.86	-0.461	3.017		0.2468	0.1126
Missouri	Cort	st2	5006	1	-4								
Missouri	Gen	st2	5009	1	-3	19.35	118.8			47.82	1.12		
Missouri	E2-TC	st3	6006	2	-5	-0.5779	91.81	-9.294	-1.056	1.378	8.971	0.05616	0.2439

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

Missouri	E2-TC	st3	6007	2	-5	4.87	113.2	-9.047	-1.586	2.983	15.9	0.05806	1.378
Missouri	Tamox	st3	6007	2	-5, -6	-13.82	144	-8.494	-0.5435	23.65	40.85	0.1094	0.3117
Missouri	Heptylphenol	st3	6502	1	-3								
Missouri	Gen-1	st4	2206	2	-3, -4	2.038	93.16	-6.879	-1.115	2.976	1.763	0.04476	0.1768
Missouri	Gen-1	st4	2211	2	-3, -4	7.064	96.97	-6.862	-0.9643	4.108	2.55	0.06645	0.1937
Missouri	BPA-1	st4	2206	2	-3	10.09	90.16	-5.935	-1.582	3.789	2.161	0.06188	0.7873
Missouri	BPA-2	st4	2305	2	-3, -4	11.59	77.27	-6.442	-1.393	6.615	3.459	0.1596	0.5359
Missouri	Nethdrone-3	st4	2301	2	-3, -4	8.298	88.14	-6.785	-0.9817	3.454	1.854	0.05843	0.1623
Missouri	Nethdrone-3	st4	2305	2	-3, -4	21.13	95.32	-6.239	-0.7698	10.62	4.158	0.1725	0.2943
Missouri	HPTE-2	st4	2305	2	-3, -4, -5	-3.935	74.71	-7.668	-1.011	5.85	3.213	0.1058	0.2397
Missouri	OTES-2	st4	2301	1	-3, -4								
Missouri	OTES-2	st4	2305	1	-3, -4, -5, -7								
Missouri	Nethdrone-4	st4	2305	2	-3, -4	11.75	83.23	-6.415	-0.8711	7.723	2.921	0.114	0.256
Missouri	Gen-2	st4	2301	2	-3, -4	-6.666	81.56	-7.185	-0.9441	3.05	1.914	0.05517	0.1416
Missouri	Gen-2	st4	2302	2	-3, -4, -5	-7.31	123.2	-6.463	-0.6831	41.23	4.209	0.1048	0.2627
Missouri	Gen-2	st4	2305	2	-3, -3, -5	-2.4E+07	96.18	-6.411	-0.4159	5.58E+12	6.473	0.1051	0.2248

Appendix H (Revisions, Tables B-5 CER1 and B-6 FW)

Table C-2. FWA Protocol. Equivocal Runs (as Classified in 2011 Analysis) Subject to the 10% Rule. Concentration Level Affected by 10% Rule. Recharacterization of Binding Status Following Application of the 10% Rule: Interactive (2), Equivocal (1), Non-Interactive (0), Non-Testable ().

Laboratory	Chemical	Sub Task	Test Run	Individual Vote	Concentration Affected by 10% Rule	Prism Fits Following Application of the 10% Rule							
						Bottom (Estimate)	Top (Estimate)	Logic50 (Estimate)	Hillslope (Estimate)	Bottom (Std Error)	Top (Std Error)	LogIC ₅₀ (Std Error)	Hillslope (Std Error)
Cero	Atr	st3	20090418B	0	-3								
Cero	BPA	st4	20090914	2	-3	10.72	99.2	-5.647	-0.9468	5.067	2.234	0.08354	0.1972
Cero	BaA_DMSO	st3	20090505DMSO	- ^a	-3, -4,-5,-6,-7,-8								
Cero	OTES	st3	20090418	1	-4.5		100.1				3.451		
Cero	Progesterone	st3	20090418	- ^a	-3, -4,-5,-6,-7,-8								
Dietrich	Atr	st3	Assay13	- ^a	-3, -4,-5,-6,-7,-8								
Dietrich	Atr	st3	Assay12_1	1	-4,-5,-6,-7,-8								
Dietrich	BaA_Ethol	st3	Assay10_1	1	-5,-6,-7,-8,-9,-10								
Dietrich	ButylPar	st2	Assay06	1	-6, -7, -8								
Dietrich	Cort	st2	Assay16	1	-4, -5, -6								
Dietrich	Cort_b	st3	Assay12_1	1	-3, -4								
Dietrich	DBP	st1	Assay03	1	-4								
Dietrich	Dex	st3	Assay15 (III)	- ^a	-3, -4,-5,-6,-7,-8								
Dietrich	Dex	st3	Assay10_2	1	-3.6, -5								
Dietrich	Dex	st3	Assay12_2	1	-3.6, -5								
Dietrich	E2-TC	st3	Assay10_1	1	-4								
Dietrich	Tamox	st3	Assay10_2	1	-3.6								
Freyberger	DBP	st3	Code B2	- ^a	-4,-5,-6,-7,-8,-8-3								
Freyberger	E2-TC	st3	Code AB	1	-3								
Freyberger	E2-TC	st3	Code B2	1	-3								
Freyberger	Zear	st3	Code A1	1	-3	2.939	63.79			1.694	2.024		
JapanCER1	BaA_DMSO	st3	91110	1	-3, -4,-5,-6,-7								
JapanCER1	Progesterone	st3	91021	1	-3, -4								
Lovelace	DBP	st2	Run24Feb09EtO	- ^a	-4,-5,-6,-7,-8, -9								

Appendix H (Revisions, Tables B-5 CERI and B-6 FW)

			H									

^a Run deleted following reanalyzes using the 10% Rule due to an insufficient number of data points to generate an hrER binding curve (see pages 1-4).

Statistical Report

Follow-up Analysis, Competitive Binding Data

Data analysis of CERI and FW hrER binding parameter summary data:
Evaluation of r^2 values to assess intra- and inter-laboratory reproducibility

Toxicity Assessment Division
National Health and Environmental Effects Research Laboratory
Office of Research and Development
U.S EPA, ORD,
Research Triangle Park, NC 27711

July 30, 2013

Report. Data analysis of CERI and FW hrER binding summary data

Date: July 30, 2013

To: Dr. John Rogers, Director, Toxicity Assessment Division (TAD)

Dr. Vickie Wilson, Branch Chief, Reproductive Toxicology Branch (RTD), TAD

Dr. Susan Laws, Principal Investigator, Endocrinology Branch, TAD

From: Dr. L E Gray Jr, with assistance from Ms Nicola Evans
RTB, TAD, U.S. EPA

Background

This report describes the follow-up statistical analysis for data from the international validation study for the CERI and FW human recombinant estrogen receptor (hrER) binding assays. The goal of this analysis was to evaluate intra- and inter-laboratory reproducibility when using each of these assays to test the ER binding potential of 3 controls, and 23 chemicals (9 uncoded, 14 coded). The follow-up analysis was performed using PRISM fit parameter data as provided by the Data Coordination Center, Battelle, Columbus, OH, December 2011 (Data used in the analysis are shown in Appendix C, Integrated Summary Report (ISR), Validation of Two Binding Assays Using Human Recombinant Estrogen Receptor Alpha (hrER α)).

Specific objections of the data analysis described in this report are:

1. Identify “False positive” runs by lab, chemical, and phase with summary statistics
2. Identify “False negative” runs by lab, chemical, and phase with summary statistics
3. Chemicals were categorized as those expected to display ER binding (positives) and those that should not (negatives) based upon previous studies conducted within the Office of Research and Development (U.S. EPA) or from historical data reported in the literature. For this evaluation, benz(a)anthracene (BaA) was designated as an expected “negative”, which is supported by reports in the literature and noted within this ISR. Chemicals that were expected to be weak hrER ligands were most problematic as compared to the consistent detection of binding by potent hrER ligands, but these chemicals were all grouped as “positives” for the current evaluation of the data.
4. Regardless of a chemical’s potency, the hypotheses were that a chemical that binds ER will displace the radio-ligand by 0% at low concentrations and 100% at high concentrations, the slope

should be -1 (declining from 80 to 20% in 2 log units) with a R² value for the model being 100% (no error).

5. Runs that had missing values for estimates of the EC₅₀, hillslope or R² were considered to be Negative. In addition, if the top of the curve was below 75% then this also was considered negative (to eliminate those runs where the range may have been from only 55% to 25%, for example).
6. R² values were categorized as “good” if they were equal to or exceeded 90%. In addition, R² values were summarized into the % between 100 and 90%, less than 90 but greater than 80%, and etc. The R² distributions were graphed by laboratory for the CERI and FW hrER binding protocols.
7. In addition, means, standard errors and CV were calculated for each lab by subtask (only St1, St2 and St3) for % bound, overall R² and distribution of R² values. This information follows in this appendix as SAS output in a word file.
8. Since all the above summary statistics were pooled over all chemicals, additional analyses were conducted by protocol, chemical, and lab and by protocol, chemical, lab and task (st1, st2 and st3). In addition to means, standard errors and CV for % bound, R² mean and R² distribution this analysis includes summary statistics for EC₅₀ and hillslope values. This information also follows in the appendix as SAS output in a word file.
9. Cautions about the analyses included in this report.
 - a. Since the summary data had flaws or missing data, the summary statistics herein also are unavoidably not without similar error.
 - b. A significant percentage of the runs with each protocol had missing data for all or some of the four logistic regression parameters. No explanation was provided explaining why this was the case, but clearly, some of these runs would have fit the four parameter logistic regression model quite well had the top and/or bottom of the curves been constrained, as appropriate. The four-parameter Hill equation model was chosen for fitting the data in all cases for both protocols. This was a decision made *a priori* by the study management team (SMT) and the model is described further in Appendix F, section 3.1. Since minor differences in the methods for the two protocols by different laboratories existed, the fact that one lab obtained good binding with a chemical and another did not might not be due to errors in one laboratory or the other but rather due to

use of different solvents (ethanol versus DMSO) and different concentrations of the test chemical. The test chemical concentration ranges that were used in each run were not included in the data summary sheets that we received.

- c. The % binding for chemicals expected to be positives is likely an underestimate as some runs defined as false negatives due to missing data would be classified as positives if the raw data were reanalyzed with, for example, application of the 10% rule for U-shaped curves or the curve be re-fit with either the top or bottom parameter constrained if a full binding curve cannot be achieved due to solubility and other issues.

Issues affecting the analysis based on the data set used for this analysis precluded definitive analysis of the data (such as IC50) or estimation of performance criteria in the time frame provided.

1. Summary statistics on the Tops and Bottoms of the curves.
 - a. Values should range from 100% to 0%. However, some of the top values are extremely high (thousands) and bottom values too low (negative thousands or lower). When a full sigmoidal curve is not obtained at the concentration range evaluated, the data analysis software will attempt to extrapolate the “top” or “bottom” of the curve. Top values from “good” runs would be extrapolated too high if the concentrations of the chemical were too high and % binding does not plateau at 100%, typically seen with potent ER ligands (see example Figure 2). Bottom values can be extrapolated too low when the chemical does not reduce radioligand binding to 20% or lower and plateau near 0% (example Figure 1). In some cases, the limit of solubility doesn’t allow testing at a concentration sufficient to see the bottom of the displacement curve. Without constraints the PRISM fit model estimates a non-sensical estimate for the bottom of curve.
 - b. This is a problem for weak ligands like most of the pesticides, phytoestrogen and toxic substances in any binding assay (not just the CERI or FW used in this exercise).
2. The above problem (1.a) can have a significant effect on the estimated IC50, in some cases by a several log units (see examples: Fig 1 and 2)
3. Since the model fits were run unconstrained at the top or bottom one cannot confirm from the summary data on the Excell sheets if “bad” tops or bottoms of curves arose from “bad” runs or from bad experimental design (when the data do not plateau at the top and/or bottom due to incomplete concentration range, as discussed above).

Figure 1: The following graphs compare the differences in PRISM fit estimates with and without constraining the bottom of the logistic regression models of rhER binding can result in very inaccurate estimates of the EC50s. In the two figures that follow accurate estimation of the EC50 requires constraining the bottom of the curve to 0%. This is a common problem with weakly estrogenic environmental chemicals

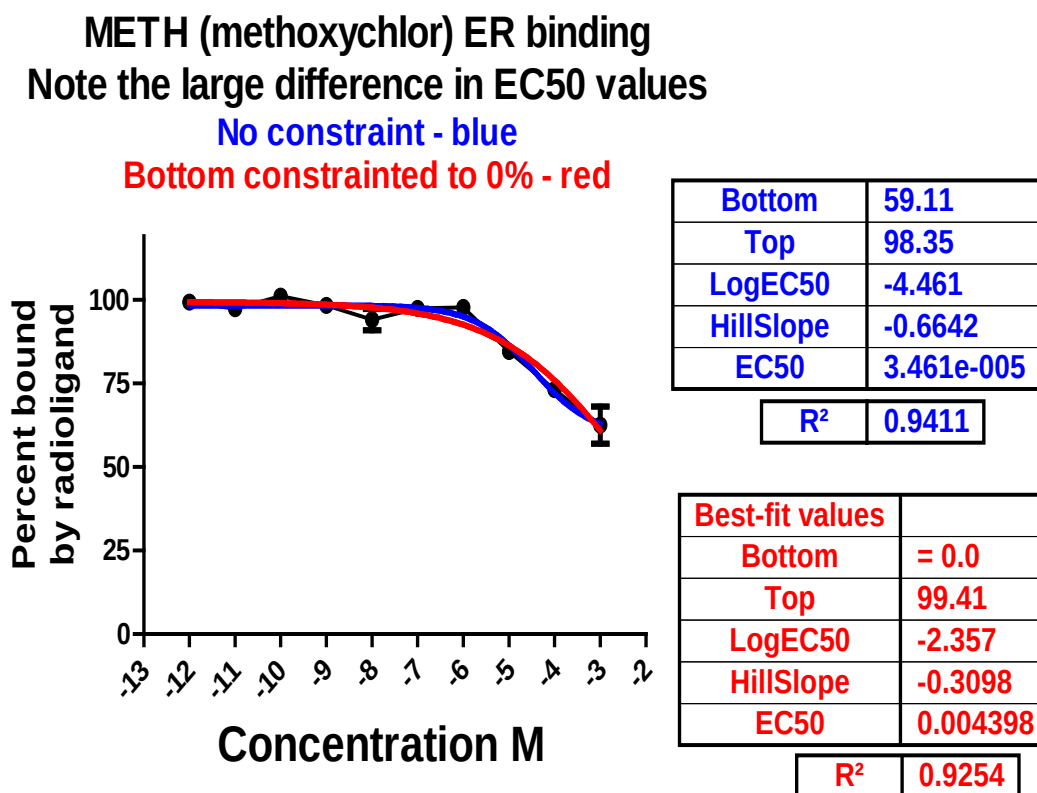
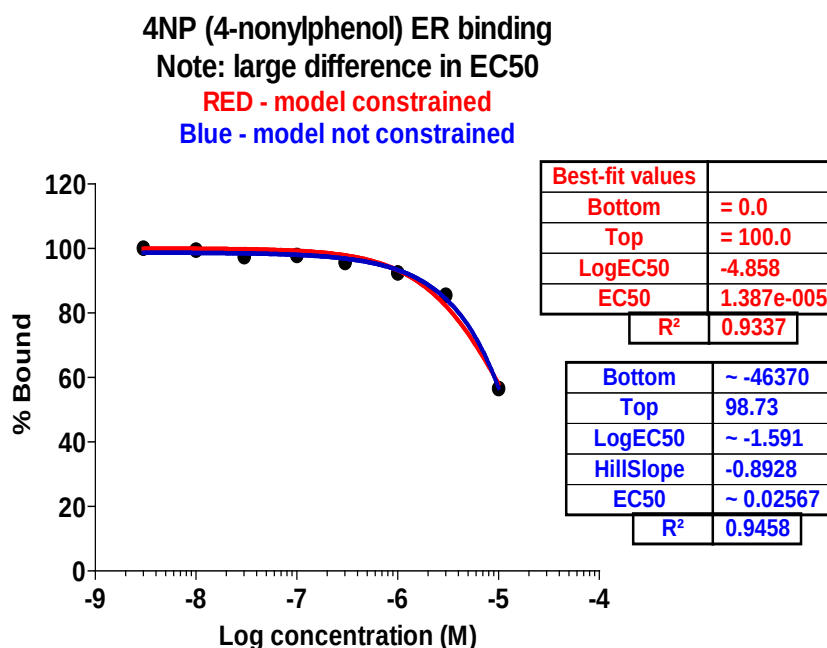
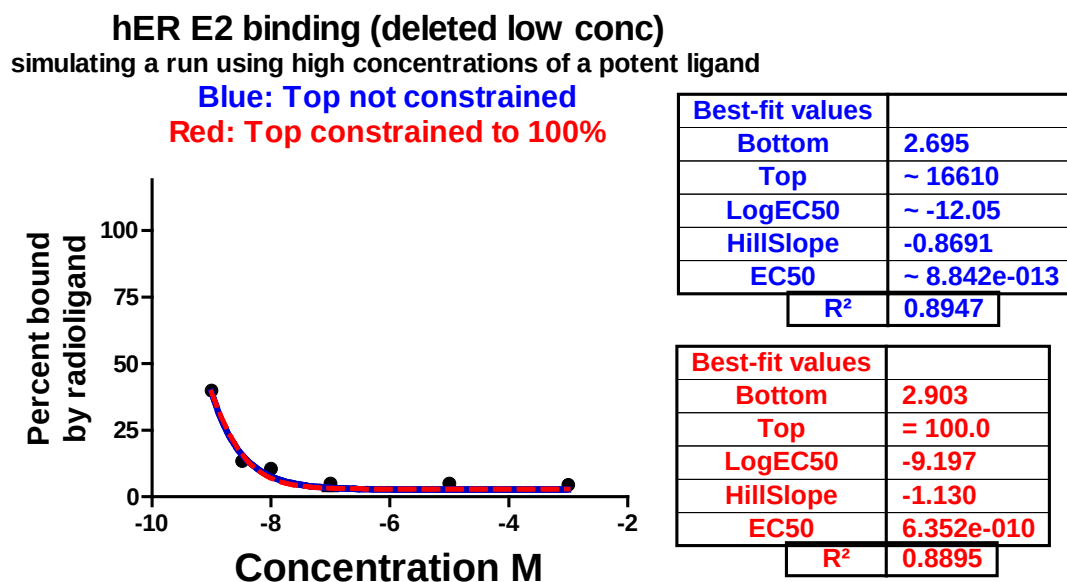
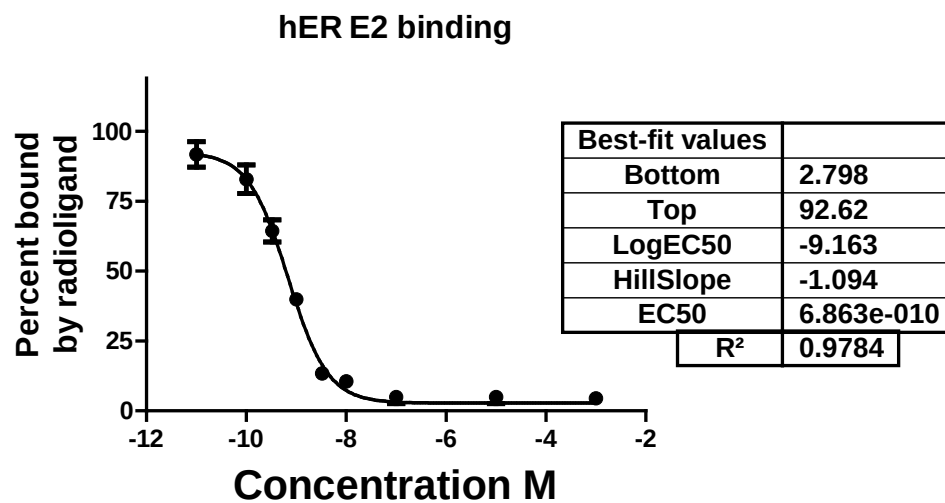


Figure 2: The figures below compare the difference in PRISM fit parameters with and without constraining the top of the curve to 100% can result in **inaccurate** EC50s values. This is more often a problem with potent ligands when the concentrations in the run are too high and the top of the curve does not plateau at or near 100%. The same data file was used for the two fits below, but in the bottom figure the lower concentrations were deleted to simulate a binding experiment run at concentrations that are too high to fit the top of the curve.



Results of the analyses of the CERI and FW hrER binding summary data, by lab to display the overall performance of each laboratory pooled over all the chemicals and tasks st1, st2 and st3.

CERI protocol data summary by laboratory.

It is evident from all of the figures that four of the five laboratories were able to properly identify the positives in most of runs, also having a high percentage of “good” R2 values ($R^2 > 90\%$). However, in the CERI data set, one or two laboratories performance was not nearly as good as the other three laboratories. Note: Laboratories are coded A through E in this figure. The laboratory codes are different for the FW data summary. Laboratory B’s performance was poorer than the other four laboratories.

Figure 3: Analysis of the data summary for chemicals Expected to be Positive for rhER binding

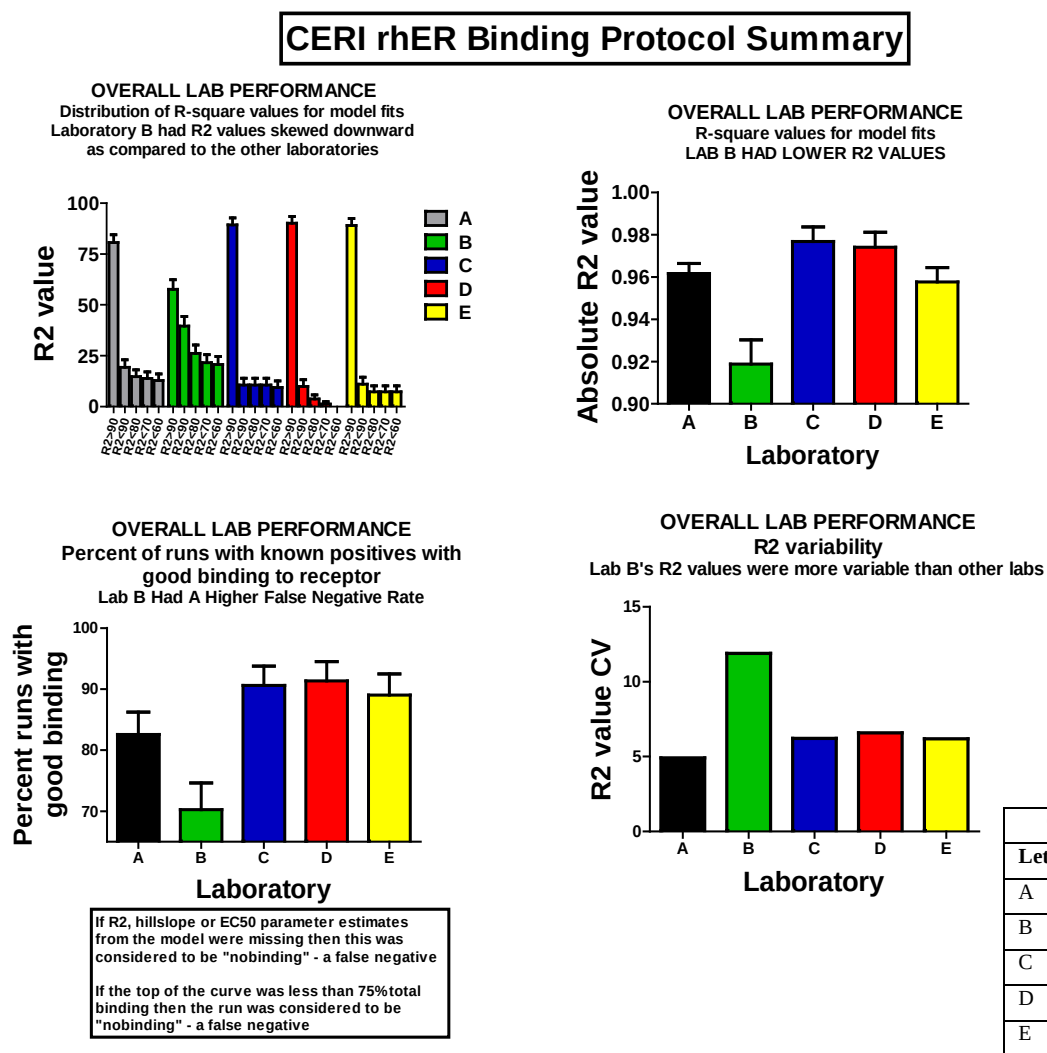
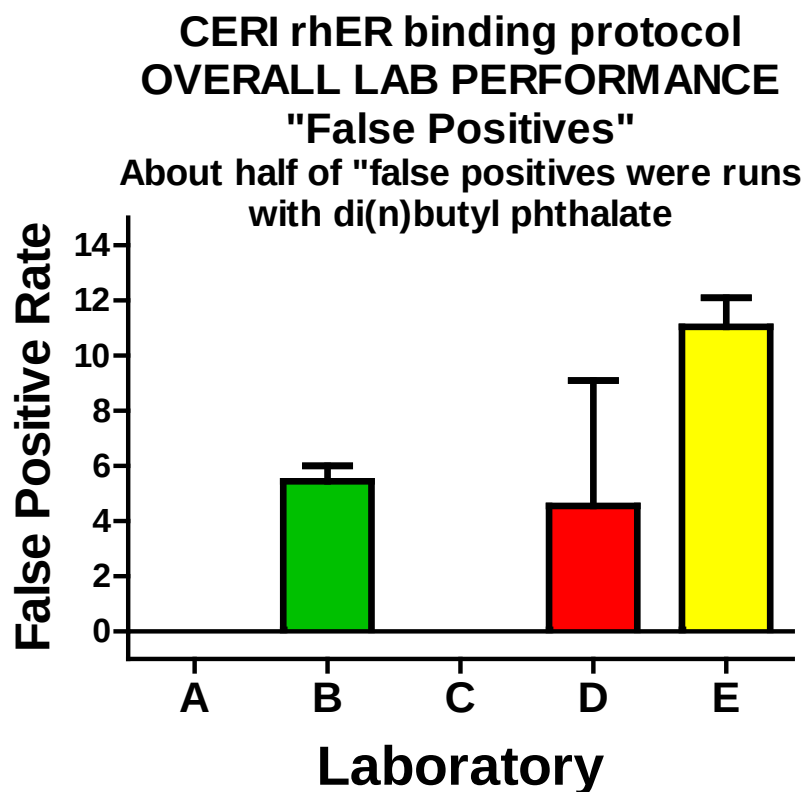


Figure 4: Analysis of the data summary for chemicals Expected to be Negative for rhER binding

The False positive rate of the negative chemicals is relatively low for the few known negatives that were used in the inter-laboratory study. About half of the false positives in this protocol were detected for Di(n)butyl Phthalate at high concentrations apparently not used by all the laboratories.

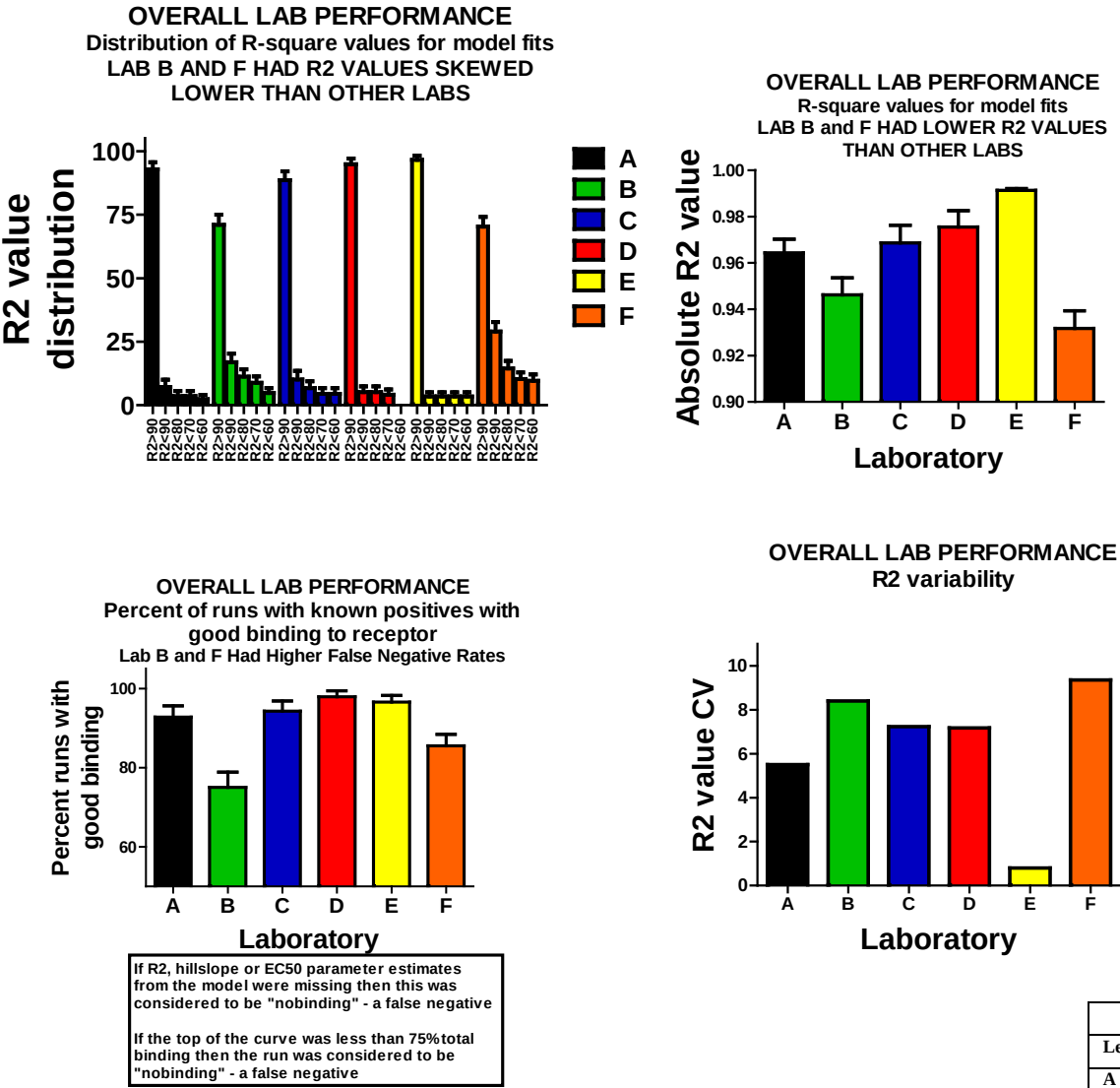


CERI Protocol	
Letter	Laboratory
A	U. Missouri
B	Lovelace
C	CERI-Japan
D	Bayer
E	Ceetox

FW protocol data summary by laboratory.

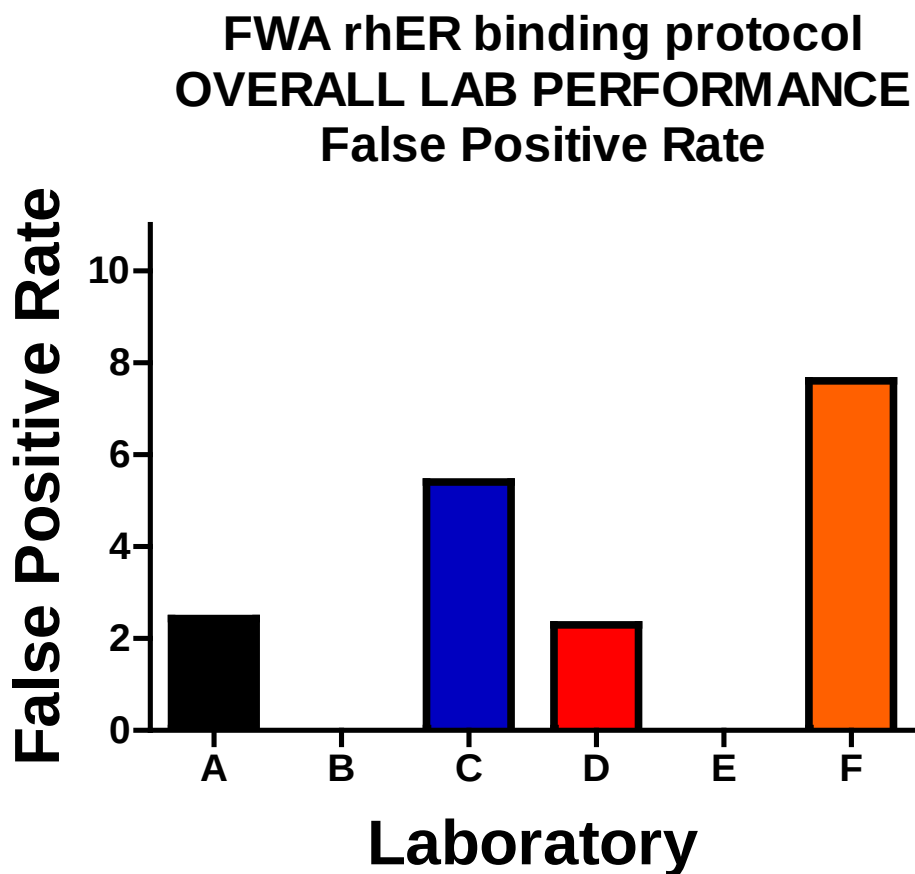
It is evident from all of the figures that four of the six laboratories were able to properly identify the positives in most of runs, also having a high percentage of “good” R2 values (R2>90%). However, in the FW data set, two laboratories performance was not nearly as good as the other four laboratories. I would consider these laboratories’ performance to be “unacceptable”. Note: Laboratories are coded A through F in this figure. NOTE: The lab codes are different for the FW data summary than for the CERI summary (A not equal A).

Figure 5: Analysis of the data summary for chemicals Expected to be Positive for hrER binding



FW Protocol	
Letter	Laboratory
A	CeeTox
B	U. Konstanz
C	Bayer
D	CERI- Japan
E	U. Missouri
F	Lovelace

Figure 6: Analysis of the data summary for chemicals Expected to be Negative for hrER binding
The False positive rate of the negative chemicals is relatively low for the few known negatives that were used in the inter-laboratory study



FW Protocol	
Letter	Laboratory
A	CeeTox
B	U. Konstanz
C	Bayer
D	CERI-Japan
E	U. Missouri
F	Lovelace

Appendix with SAS summaries of the data, as described on page 1 of this report.

These initial analyses included only chemicals expected to be “positive” for rhER binding (not including BaP, whose expected results should be “negative”. Runs clearly identified by the laboratories themselves as “bad runs” or “questionable runs” were deleted. The categorization of acceptable/unacceptable runs by OSCP EPA was not used for two reasons. First, it was quite clear that this information was unrelated to the quality of the test chemical run, and secondly, there is no record of the criteria used to assign these categories, hence they are not defensible.

SAS Output Contents

Page 11. CERi protocol summary statistics by Laboratory and by Laboratory and Task

Page 19. FW protocol summary statistics by Laboratory and by Laboratory and Task

Page 28. CERi protocol summary statistics by Chemical and Laboratory and by Chemical, Laboratory and Task

Page 128. FW protocol summary statistics by Chemical and Laboratory and by Chemical, Laboratory and Task

CERI summary statistics

The following SAS output includes means, standard errors, sample sizes (number of runs) and CV, first by Laboratory and Task, and then by Laboratory. In addition to the variables described earlier, this files include compete20 (% of runs where the displacement of the radioligand was down to 20% or lower) and compete50 (the % of runs where the displacement of the radioligand was down to 50% or lower). The data are pooled over all the chemicals expected to be positive for rhER binding

CERI protocol: Overall Means across all chemicals (across st 1, 2 and 3) per Lab

----- Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	82.9268293	4.1808262	82	45.6534895
compete50	93.9024390	2.6587286	82	25.6391756
r2	0.9576130	0.0067525	77	6.1875249
bind	89.0243902	3.4731723	82	35.3284222
okr2	89.0243902	3.4731723	82	35.3284222
BADFIT90	10.9756098	3.4731723	82	286.5527575
BADFIT80	7.3170732	2.8935171	82	358.0927990
BADFIT70	7.3170732	2.8935171	82	358.0927990
BADFIT60	7.3170732	2.8935171	82	358.0927990

----- Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	97.5308642	1.7349962	81	16.0102815
compete50	97.5308642	1.7349962	81	16.0102815
r2	0.9739605	0.0071168	81	6.5763396
bind	91.3580247	3.1414841	81	30.9478637
okr2	90.1234568	3.3356188	81	33.3104945
BADFIT90	9.8765432	3.3356188	81	303.9582619
BADFIT80	3.7037037	2.1114360	81	513.0789413
BADFIT70	1.2345679	1.2345679	81	900.0000000
BADFIT60	0	0	81	.

----- Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	88.2352941	3.5153783	85	36.7315443
compete50	91.7647059	2.9994232	85	30.1350238
r2	0.9767385	0.0068836	78	6.2242316
bind	90.5882353	3.1858974	85	32.4242135
okr2	89.4117647	3.3571402	85	34.6165895
BADFIT90	10.5882353	3.3571402	85	292.3178671
BADFIT80	10.5882353	3.3571402	85	292.3178671
BADFIT70	10.5882353	3.3571402	85	292.3178671
BADFIT60	9.4117647	3.1858974	85	312.0830552

----- Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	61.2612613	4.6448251	111	79.8812622
compete50	73.8738739	4.1887709	111	59.7388997
r2	0.9187648	0.0114479	91	11.8861952
bind	70.2702703	4.3579772	111	65.3393508
okr2	57.6576577	4.7110704	111	86.0843270
BADFIT90	39.6396396	4.6638483	111	123.9584708
BADFIT80	26.1261261	4.1887709	111	168.9168889
BADFIT70	21.6216216	3.9250566	111	191.2577984
BADFIT60	20.7207207	3.8644343	111	196.4909556

----- Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.4862385	3.5728812	109	44.6803872
compete50	87.1559633	3.2194927	109	38.5659103
r2	0.9615147	0.0048131	95	4.8789870
bind	82.5688073	3.6505616	109	46.1590558
okr2	80.7339450	3.7950072	109	49.0760593
BADFIT90	19.2660550	3.7950072	109	205.6520580
BADFIT80	14.6788991	3.4053605	109	242.2048605
BADFIT70	13.7614679	3.3149057	109	251.4893906
BADFIT60	12.8440367	3.2194927	109	261.6972482

CERI protocol: Means across all chemicals per Lab per subtask

----- Lab=Ceetox Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9881000	0.0026599	6	0.6593988
bind	100.0000000	0	6	0
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	93.3333333	4.6320556	30	27.1830141
compete50	96.6666667	3.3333333	30	18.8869847
r2	0.9636379	0.0062717	29	3.5048610
bind	90.0000000	5.5708601	30	33.9031752
okr2	93.3333333	4.6320556	30	27.1830141
BADFIT90	6.6666667	4.6320556	30	380.5621976
BADFIT80	3.3333333	3.3333333	30	547.7225575
BADFIT70	3.3333333	3.3333333	30	547.7225575
BADFIT60	3.3333333	3.3333333	30	547.7225575

----- Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	73.9130435	6.5458492	46	60.0653239
compete50	91.3043478	4.2003991	46	31.2016822
r2	0.9490976	0.0114307	42	7.8052621
bind	86.9565217	5.0204371	46	39.1578004
okr2	84.7826087	5.3544792	46	42.8340733
BADFIT90	15.2173913	5.3544792	46	238.6469798
BADFIT80	10.8695652	4.6399451	46	289.5206767
BADFIT70	10.8695652	4.6399451	46	289.5206767
BADFIT60	10.8695652	4.6399451	46	289.5206767

----- Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	36	0
compete50	100.0000000	0	36	0
r2	0.9939889	0.0010592	36	0.6393397
bind	91.6666667	4.6717659	36	30.5788315
okr2	100.0000000	0	36	0
BADFIT90	0	0	36	.
BADFIT80	0	0	36	.
BADFIT70	0	0	36	.
BADFIT60	0	0	36	.

----- Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	95.5555556	3.1067791	45	21.8102523
compete50	95.5555556	3.1067791	45	21.8102523
r2	0.9579378	0.0123254	45	8.6312066
bind	91.1111111	4.2902547	45	31.5876986
okr2	82.2222222	5.7637748	45	47.0244852
BADFIT90	17.7777778	5.7637748	45	217.4882442
BADFIT80	6.6666667	3.7605072	45	378.3937343
BADFIT70	2.2222222	2.2222222	45	670.8203932
BADFIT60	0	0	45	.

----- Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9901000	0.0017808	6	0.4405726
bind	100.0000000	0	6	0
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	93.3333333	4.6320556	30	27.1830141
compete50	100.0000000	0	30	0
r2	0.9680500	0.0137480	30	7.7786072
bind	96.6666667	3.3333333	30	18.8869847
okr2	96.6666667	3.3333333	30	18.8869847
BADFIT90	3.3333333	3.3333333	30	547.7225575
BADFIT80	3.3333333	3.3333333	30	547.7225575
BADFIT70	3.3333333	3.3333333	30	547.7225575
BADFIT60	3.3333333	3.3333333	30	547.7225575

----- Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.6734694	5.3348256	49	44.6303699
compete50	85.7142857	5.0507627	49	41.2478956
r2	0.9810357	0.0082056	42	5.4206639
bind	85.7142857	5.0507627	49	41.2478956
okr2	83.6734694	5.3348256	49	44.6303699
BADFIT90	16.3265306	5.3348256	49	228.7306458
BADFIT80	16.3265306	5.3348256	49	228.7306458
BADFIT70	16.3265306	5.3348256	49	228.7306458
BADFIT60	14.2857143	5.0507627	49	247.4873734

----- Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	88.8888889	11.1111111	9	37.5000000
compete50	88.8888889	11.1111111	9	37.5000000
r2	0.9292111	0.0319252	9	10.3071924
bind	88.8888889	11.1111111	9	37.5000000
okr2	66.6666667	16.6666667	9	75.0000000
BADFIT90	22.2222222	14.6986184	9	198.4313483
BADFIT80	11.1111111	11.1111111	9	300.0000000
BADFIT70	0	0	9	.
BADFIT60	0	0	9	.

----- Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	45.2830189	6.9028284	53	110.9761467
compete50	64.1509434	6.6502614	53	75.4698705
r2	0.8686390	0.0211114	41	15.5621376
bind	60.3773585	6.7827701	53	81.7844846
okr2	37.7358491	6.7219368	53	129.6815627
BADFIT90	60.3773585	6.7827701	53	81.7844846
BADFIT80	35.8490566	6.6502614	53	135.0513473
BADFIT70	30.1886792	6.3662445	53	153.5243028
BADFIT60	28.3018868	6.2468329	53	160.6876250

----- Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	73.4693878	6.3724469	49	60.7152583
compete50	81.6326531	5.5890057	49	47.9257238
r2	0.9665976	0.0065898	41	4.3653436
bind	77.5510204	6.0224256	49	54.3603151
okr2	77.5510204	6.0224256	49	54.3603151
BADFIT90	20.4081633	5.8172216	49	199.5306994
BADFIT80	18.3673469	5.5890057	49	213.0032168
BADFIT70	16.3265306	5.3348256	49	228.7306458
BADFIT60	16.3265306	5.3348256	49	228.7306458

----- Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	22	0
compete50	100.0000000	0	22	0
r2	0.9714636	0.0056194	22	2.7131515
bind	100.0000000	0	22	0
okr2	95.4545455	4.5454545	22	22.3353131
BADFIT90	4.5454545	4.5454545	22	469.0415760
BADFIT80	0	0	22	.
BADFIT70	0	0	22	.
BADFIT60	0	0	22	.

----- Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	93.3333333	4.6320556	30	27.1830141
compete50	100.0000000	0	30	0
r2	0.9687733	0.0050743	30	2.8689219
bind	96.6666667	3.3333333	30	18.8869847
okr2	96.6666667	3.3333333	30	18.8869847
BADFIT90	3.3333333	3.3333333	30	547.7225575
BADFIT80	0	0	30	.
BADFIT70	0	0	30	.
BADFIT60	0	0	30	.

----- Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	71.9298246	6.0045857	57	63.0248002
compete50	75.4385965	5.7521391	57	57.5669479
r2	0.9513605	0.0094619	43	6.5218328
bind	68.4210526	6.2115457	57	68.5405150
okr2	66.6666667	6.2994079	57	71.3392298
BADFIT90	33.3333333	6.2994079	57	142.6784597
BADFIT80	28.0701754	6.0045857	57	161.5010504
BADFIT70	26.3157895	5.8843894	57	168.8194302
BADFIT60	24.5614035	5.7521391	57	176.8127685

FW Protocol

The following SAS output includes means, standard errors, sample sizes (number of runs) and CV, first by Laboratory, and then by Laboratory and Task. In addition to the variables described earlier, this files include compete20 (% of runs where the displacement of the radioligand was down to 20% or lower) and compete50 (the % of runs where the displacement of the radioligand was down to 50% or lower). The data are pooled over all the chemicals expected to be positive for rhER binding

FW Protocol: Overall means across all chemicals per lab

----- Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	95.0000000	2.4520722	80	23.0863166
compete50	97.5000000	1.7565429	80	16.1138436
r2	0.9662974	0.0058084	78	5.3087972
bind	95.0000000	2.4520722	80	23.0863166
okr2	93.7500000	2.7234042	80	25.9827921
BADFIT90	6.2500000	2.7234042	80	389.7418815
BADFIT80	3.7500000	2.1374820	80	509.8191952
BADFIT70	3.7500000	2.1374820	80	509.8191952
BADFIT60	2.5000000	1.7565429	80	628.4399008

----- Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	69.4214876	4.2059539	121	66.6443415
compete50	75.2066116	3.9418975	121	57.6556660
r2	0.9458339	0.0074757	115	8.4759573
bind	74.3801653	3.9849797	121	58.9334213
okr2	70.2479339	4.1733491	121	65.3497378
BADFIT90	17.3553719	3.4572728	121	219.1252450
BADFIT80	11.5702479	2.9199802	121	277.6066933
BADFIT70	9.0909091	2.6243194	121	317.5426481
BADFIT60	4.9586777	1.9817486	121	439.6178896

----- Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	91.6666667	3.0337239	84	30.3322240
compete50	95.2380952	2.3375271	84	22.4949794
r2	0.9710358	0.0076732	81	7.1118312
bind	94.0476190	2.5970494	84	25.3088291
okr2	89.2857143	3.3949513	84	34.8490722
BADFIT90	9.5238095	3.2220588	84	310.0718922
BADFIT80	5.9523810	2.5970494	84	399.8794999
BADFIT70	4.7619048	2.3375271	84	449.8995872
BADFIT60	4.7619048	2.3375271	84	449.8995872

----- Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	96.7391304	1.8618604	92	18.4603037
compete50	100.0000000	0	92	0
r2	0.9784674	0.0065886	92	6.4586156
bind	98.9130435	1.0869565	92	10.5402891
okr2	95.6521739	2.1377790	92	21.4368948
BADFIT90	4.3478261	2.1377790	92	471.6116860
BADFIT80	4.3478261	2.1377790	92	471.6116860
BADFIT70	3.2608696	1.8618604	92	547.6556764
BADFIT60	0	0	92	.

----- Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	82.3943662	3.2074880	142	46.3886452
compete50	88.0281690	2.7338933	142	37.0087205
r2	0.9319679	0.0076702	131	9.4198276
bind	85.9154930	2.9295237	142	40.6321402
okr2	70.4225352	3.8434988	142	65.0368145
BADFIT90	28.8732394	3.8164073	142	157.5082747
BADFIT80	14.0845070	2.9295237	142	247.8560552
BADFIT70	9.8591549	2.5105629	142	303.4419236
BADFIT60	9.1549296	2.4286707	142	316.1242375

----- Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	96.4285714	1.7614177	112	19.3315038
compete50	100.0000000	0	112	0
r2	0.9912652	0.000748651	112	0.7992798
bind	100.0000000	0	112	0
okr2	100.0000000	0	112	0
BADFIT90	0	0	112	.
BADFIT80	0	0	112	.
BADFIT70	0	0	112	.
BADFIT60	0	0	112	.

FW Protocol: Means per Lab per subtask

----- Lab=Ceetox Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9675333	0.0029242	6	0.7403225
bind	100.0000000	0	6	0
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	97.6744186	2.3255814	43	15.6129489
compete50	100.0000000	0	43	0
r2	0.9688302	0.0060063	43	4.0653229
bind	95.3488372	3.2494797	43	22.3476907
okr2	95.3488372	3.2494797	43	22.3476907
BADFIT90	4.6511628	3.2494797	43	458.1276595
BADFIT80	0	0	43	.
BADFIT70	0	0	43	.
BADFIT60	0	0	43	.

----- Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.3225806	5.3978066	31	33.2737563
compete50	93.5483871	4.4853019	31	26.6953868
r2	0.9622862	0.0129640	29	7.2549441
bind	93.5483871	4.4853019	31	26.6953868
okr2	90.3225806	5.3978066	31	33.2737563
BADFIT90	9.6774194	5.3978066	31	310.5550586
BADFIT80	9.6774194	5.3978066	31	310.5550586
BADFIT70	9.6774194	5.3978066	31	310.5550586
BADFIT60	6.4516129	4.4853019	31	387.0831091

----- Lab=Dietrich Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.3333333	16.6666667	6	48.9897949
compete50	83.3333333	16.6666667	6	48.9897949
r2	0.9631833	0.0071043	6	1.8067175
bind	83.3333333	16.6666667	6	48.9897949
okr2	83.3333333	16.6666667	6	48.9897949
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	62.1621622	8.0830443	37	79.0951240
compete50	64.8648649	7.9565413	37	74.6132001
r2	0.9086030	0.0193589	33	12.2394821
bind	64.8648649	7.9565413	37	74.6132001
okr2	56.7567568	8.2568931	37	88.4911737
BADFIT90	37.8378378	8.0830443	37	129.9419895
BADFIT80	27.0270270	7.4016562	37	166.5833125
BADFIT70	18.9189189	6.5276472	37	209.8752464
BADFIT60	10.8108108	5.1752817	37	291.1900868

----- Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	71.7948718	5.1282051	78	63.0840062
compete50	79.4871795	4.6016742	78	51.1288572
r2	0.9606303	0.0068980	76	6.2600122
bind	78.2051282	4.7048893	78	53.1326506
okr2	75.6410256	4.8917341	78	57.1153357
BADFIT90	8.9743590	3.2571535	78	320.5398971
BADFIT80	5.1282051	2.5136563	78	432.9002165
BADFIT70	5.1282051	2.5136563	78	432.9002165
BADFIT60	2.5641026	1.8012825	78	620.4313539

----- Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	97.6190476	2.3809524	42	15.8066846
compete50	100.0000000	0	42	0
r2	0.9744452	0.0130404	42	8.6727848
bind	97.6190476	2.3809524	42	15.8066846
okr2	95.2380952	3.3258586	42	22.6317282
BADFIT90	4.7619048	3.3258586	42	452.6345643
BADFIT80	2.3809524	2.3809524	42	648.0740698
BADFIT70	2.3809524	2.3809524	42	648.0740698
BADFIT60	2.3809524	2.3809524	42	648.0740698

----- Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	85.7142857	5.4649433	42	41.3196935
compete50	90.4761905	4.5843796	42	32.8375626
r2	0.9673641	0.0076918	39	4.9655945
bind	90.4761905	4.5843796	42	32.8375626
okr2	83.3333333	5.8202525	42	45.2634564
BADFIT90	14.2857143	5.4649433	42	247.9181612
BADFIT80	9.5238095	4.5843796	42	311.9568450
BADFIT70	7.1428571	4.0220893	42	364.9256523
BADFIT60	7.1428571	4.0220893	42	364.9256523

----- Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9967167	0.000554026	6	0.1361551
bind	100.0000000	0	6	0
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	30	0
compete50	100.0000000	0	30	0
r2	0.9932267	0.0021440	30	1.1823045
bind	100.0000000	0	30	0
okr2	100.0000000	0	30	0
BADFIT90	0	0	30	.
BADFIT80	0	0	30	.
BADFIT70	0	0	30	.
BADFIT60	0	0	30	.

----- Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	94.6428571	3.0361917	56	24.0068601
compete50	100.0000000	0	56	0
r2	0.9686054	0.0105903	56	8.1819197
bind	98.2142857	1.7857143	56	13.6060269
okr2	92.8571429	3.4726602	56	27.9860105
BADFIT90	7.1428571	3.4726602	56	363.8181364
BADFIT80	7.1428571	3.4726602	56	363.8181364
BADFIT70	5.3571429	3.0361917	56	424.1211948
BADFIT60	0	0	56	.

----- Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	8	0
compete50	100.0000000	0	8	0
r2	0.9365625	0.0094854	8	2.8646053
bind	100.0000000	0	8	0
okr2	87.5000000	12.5000000	8	40.4061018
BADFIT90	12.5000000	12.5000000	8	282.8427125
BADFIT80	0	0	8	.
BADFIT70	0	0	8	.
BADFIT60	0	0	8	.

----- Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.9036145	4.7228076	83	56.6861345
compete50	84.3373494	4.0136147	83	43.3565559
r2	0.9325365	0.0105987	74	9.7769517
bind	80.7228916	4.3562458	83	49.1648490
okr2	66.2650602	5.2212603	83	71.7843531
BADFIT90	33.7349398	5.2212603	83	141.0049793
BADFIT80	16.8674699	4.1352669	83	223.3534409
BADFIT70	12.0481928	3.5948139	83	271.8275996
BADFIT60	12.0481928	3.5948139	83	271.8275996

----- Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.1960784	4.2054138	51	33.2970817
compete50	92.1568627	3.8021018	51	29.4632840
r2	0.9303592	0.0128726	49	9.6853132
bind	92.1568627	3.8021018	51	29.4632840
okr2	74.5098039	6.1632289	51	59.0717672
BADFIT90	23.5294118	5.9988465	51	182.0714146
BADFIT80	11.7647059	4.5564510	51	276.5863337
BADFIT70	7.8431373	3.8021018	51	346.1935875
BADFIT60	5.8823529	3.3275613	51	403.9801975

----- Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	12	0
compete50	100.0000000	0	12	0
r2	0.9897583	0.0024147	12	0.8451249
bind	100.0000000	0	12	0
okr2	100.0000000	0	12	0
BADFIT90	0	0	12	.
BADFIT80	0	0	12	.
BADFIT70	0	0	12	.
BADFIT60	0	0	12	.

----- Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	93.1818182	3.8438431	44	27.3628172
compete50	100.0000000	0	44	0
r2	0.9922432	0.000769307	44	0.5142897
bind	100.0000000	0	44	0
okr2	100.0000000	0	44	0
BADFIT90	0	0	44	.
BADFIT80	0	0	44	.
BADFIT70	0	0	44	.
BADFIT60	0	0	44	.

----- Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	98.2142857	1.7857143	56	13.6060269
compete50	100.0000000	0	56	0
r2	0.9908196	0.0012739	56	0.9621071
bind	100.0000000	0	56	0
okr2	100.0000000	0	56	0
BADFIT90	0	0	56	.
BADFIT80	0	0	56	.
BADFIT70	0	0	56	.
BADFIT60	0	0	56	.

The following SAS output presents the summary statistics for all the chemicals, negatives and positives run in the CERI hrER binding protocol, first by laboratory and by chemical and then by laboratory, chemical and task.

----- Chemical=17EE Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	.	1	.
compete50	100.0000000	.	1	.
r2	0.9849000	.	1	.
bind	100.0000000	.	1	.
Logic50	-9.3930000	.	1	.
HillSlope	-0.7812000	.	1	.
okr2	100.0000000	.	1	.

----- Chemical=Atr Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Atr Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Atr Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Atr Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=Atr Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=BPA Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9687000	0.0164667	4	3.3997593
bind	100.0000000	0	4	0
Logic50	-5.7470000	0.5666714	4	-19.7205993
HillSlope	-0.9909000	0.0849468	4	-17.1453824
okr2	100.0000000	0	4	0

----- Chemical=BPA Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9922667	0.0026422	3	0.4612055
bind	100.0000000	0	3	0
Logic50	-5.7586667	0.0359645	3	-1.0817143
HillSlope	-0.8723000	0.0111002	3	-2.2040610
okr2	100.0000000	0	3	0

----- Chemical=BPA Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9035250	0.0832532	4	18.4285309
bind	100.0000000	0	4	0
Logic50	-4.5967500	0.0430569	4	-1.8733623
HillSlope	-1.2116500	0.1596040	4	-26.3448942
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=BPA Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9806000	0.0050254	4	1.0249715
bind	100.0000000	0	4	0
Logic50	-5.1112500	0.2488066	4	-9.7356463
HillSlope	-0.8321250	0.0656940	4	-15.7894559
okr2	100.0000000	0	4	0

----- Chemical=BPA Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9717667	0.0120985	3	2.1564096
bind	100.0000000	0	3	0
Logic50	-5.4790000	0.1754451	3	-5.5462659
HillSlope	-0.7343000	0.0464346	3	-10.9528868
okr2	100.0000000	0	3	0

----- Chemical=BaA Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.9781000	.	1	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-3.7650000	.	1	.
HillSlope	-0.6319000	.	1	.
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=BaA Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=BaA Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=BaA Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	0.6933000	.	1	.
bind	0	0	4	.
Logic50	-5.5550000	.	1	.
HillSlope	-0.5503000	.	1	.
okr2	0	0	4	.

----- Chemical=BaA Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=ButylPar Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9494000	0.0048014	3	0.8759479
bind	100.0000000	0	3	0
Logic50	-4.7156667	0.0647182	3	-2.3770806
HillSlope	-0.6580333	0.0239010	3	-6.2911320
okr2	100.0000000	0	3	0

----- Chemical=ButylPar Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9943667	0.000693622	3	0.1208194
bind	100.0000000	0	3	0
Logic50	-4.8206667	0.0685501	3	-2.4629828
HillSlope	-0.6150000	0.0352762	3	-9.9349993
okr2	100.0000000	0	3	0

----- Chemical=ButylPar Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	100.0000000	0	3	0
r2	0.8380000	0.1319192	3	27.2662038
bind	100.0000000	0	3	0
Logic50	-3.6363333	0.0684893	3	-3.2622660
HillSlope	-0.8567333	0.3291611	3	-66.5462239
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=ButylPar Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.8731333	0.0478649	3	9.4950473
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-4.0933333	0.0809863	3	-3.4268490
HillSlope	-0.8261333	0.0300873	3	-6.3080368
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=ButylPar Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9082000	0.0170154	3	3.2450464
bind	100.0000000	0	3	0
Logic50	-3.4656667	0.2206855	3	-11.0292945
HillSlope	-0.4759000	0.1358011	3	-49.4251627
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Cort Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	16.6666667	16.6666667	6	244.9489743
compete50	16.6666667	16.6666667	6	244.9489743
r2	0.7789000	.	1	.
bind	16.6666667	16.6666667	6	244.9489743
Logic50	-4.8250000	.	1	.
HillSlope	-0.1495000	.	1	.
okr2	0	0	6	.

----- Chemical=Cort Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	10	.
compete50	0	0	10	.
r2	.	.	0	.
bind	0	0	10	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	10	.

----- Chemical=DBP Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	15	.
compete50	0	0	15	.
r2	.	.	0	.
bind	0	0	15	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	15	.

----- Chemical=DBP Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	16	.
compete50	0	0	16	.
r2	.	.	0	.
bind	0	0	16	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	16	.

----- Chemical=DBP Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	4.7619048	4.7619048	21	458.2575695
compete50	4.7619048	4.7619048	21	458.2575695
r2	0.7845000	0.1635000	2	29.4740494
bind	0	0	21	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	4.7619048	4.7619048	21	458.2575695

----- Chemical=DBP Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	24	.
compete50	0	0	24	.
r2	.	.	0	.
bind	0	0	24	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	24	.

----- Chemical=DBP-TC Lab=Geetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9564000	0.0259000	2	3.8297921
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-4.0405000	0.8605000	2	-30.1183213
HillSlope	-1.3120000	0.0840000	2	-9.0544161
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=DBP-TC Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9864667	0.0010171	3	0.1785796
bind	100.0000000	0	3	0
Logic50	-3.6880000	0.0986526	3	-4.6331696
HillSlope	-1.4692667	0.5948388	3	-70.1228073
okr2	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP-TC Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.7604500	0.1825500	2	33.9489363
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-4.5900000	.	1	.
HillSlope	-0.6218000	.	1	.
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=DBP-TC Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DDT Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9822667	0.0032199	3	0.5677721
bind	100.0000000	0	3	0
Logic50	-5.2843333	0.0792072	3	-2.5961811
HillSlope	-0.8741000	0.0055185	3	-1.0934953
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9951000	0.0017039	3	0.2965803
bind	100.0000000	0	3	0
Logic50	-5.6113333	0.0430362	3	-1.3283976
HillSlope	-0.9103333	0.0376185	3	-7.1575038
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9820667	0.0059404	3	1.0476876
bind	100.0000000	0	3	0
Logic50	-4.3290000	0.0175594	3	-0.7025598
HillSlope	-0.9466667	0.0222305	3	-4.0673587
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.7656333	0.1149441	3	26.0031760
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-4.2883333	1.1510031	3	-46.4888262
HillSlope	-0.6433000	0.1407113	3	-37.8857738
okr2	0	0	4	.

----- Chemical=DDT Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9552667	0.0096058	3	1.7416821
bind	100.0000000	0	3	0
Logic50	-4.3776667	0.1816813	3	-7.1883344
HillSlope	-0.8202333	0.0841885	3	-17.7777096
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9947667	0.0015169	3	0.2641242
bind	100.0000000	0	3	0
Logic50	-8.6280000	0.1190812	3	-2.3905273
HillSlope	-1.0422333	0.0707089	3	-11.7508696
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9921000	0.0050203	3	0.8764642
bind	100.0000000	0	3	0
Logic50	-8.4733333	0.0204151	3	-0.4173098
HillSlope	-1.0056333	0.1218263	3	-20.9827270
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9875333	0.0051350	3	0.9006284
bind	100.0000000	0	3	0
Logic50	-7.4303333	0.1141408	3	-2.6606825
HillSlope	-1.0744333	0.1233739	3	-19.8886120
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	40.0000000	24.4948974	5	136.9306394
compete50	80.0000000	20.0000000	5	55.9016994
r2	0.9316600	0.0338686	5	8.1287641
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-7.9014000	1.0471418	5	-29.6337391
HillSlope	-0.6808800	0.1317380	5	-43.2638747
okr2	40.0000000	24.4948974	5	136.9306394

----- Chemical=DES Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9894333	0.0044968	3	0.7871846
bind	100.0000000	0	3	0
Logic50	-7.8356667	0.2531965	3	-5.5968323
HillSlope	-0.9884333	0.0551766	3	-9.6686978
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9889000	0.0022000	3	0.3853283
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-4.8266667	0.0394982	3	-1.4173956
HillSlope	-1.1853333	0.0256667	3	-3.7505037
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=DHT Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9912000	0.0024379	3	0.4260047
bind	100.0000000	0	3	0
Logic50	-5.4033333	0.0243607	3	-0.7808883
HillSlope	-0.9936333	0.0892538	3	-15.5582597
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9661333	0.0164380	3	2.9469481
bind	100.0000000	0	3	0
Logic50	-4.0906667	0.0629453	3	-2.6652003
HillSlope	-0.9186333	0.1259937	3	-23.7556651
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9192000	0.0531098	4	11.5556656
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-5.8113333	0.7153781	3	-21.3216329
HillSlope	-0.9250667	0.1741997	3	-32.6163152
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=DHT Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9280500	0.0383500	2	5.8439836
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-5.0550000	.	1	.
HillSlope	-0.8116000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=E2 Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	11	0
compete50	100.0000000	0	11	0
r2	0.9791091	0.0029619	11	1.0033192
bind	100.0000000	0	11	0
Logic50	-8.7650000	0.0811077	11	-3.0690669
HillSlope	-1.1672636	0.0656807	11	-18.6623049
okr2	100.0000000	0	11	0

----- Chemical=E2 Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	15	0
compete50	100.0000000	0	15	0
r2	0.9974467	0.000457516	15	0.1776487
bind	100.0000000	0	15	0
Logic50	-9.0481333	0.0118514	15	-0.5072903
HillSlope	-1.1541333	0.0327757	15	-10.9987059
okr2	100.0000000	0	15	0

----- Chemical=E2 Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	16	0
compete50	100.0000000	0	16	0
r2	0.9896625	0.0024119	16	0.9748286
bind	100.0000000	0	16	0
Logic50	-8.8183750	0.0238968	16	-1.0839550
HillSlope	-1.3378125	0.0322664	16	-9.6475008
okr2	100.0000000	0	16	0

----- Chemical=E2 Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	20	0
compete50	100.0000000	0	20	0
r2	0.9456500	0.0163173	20	7.7167049
bind	100.0000000	0	20	0
Logic50	-8.8187500	0.0942194	20	-4.7780248
HillSlope	-1.1087700	0.1073240	20	-43.2883009
okr2	85.0000000	8.1917802	20	43.0997116

----- Chemical=E2 Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	23	0
compete50	100.0000000	0	23	0
r2	0.9813130	0.0033561	23	1.6402023
bind	100.0000000	0	23	0
Logic50	-9.0821304	0.0285798	23	-1.5091590
HillSlope	-1.1357783	0.0427176	23	-18.0375419
okr2	100.0000000	0	23	0

----- Chemical=E2-TC Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9657667	0.0029356	3	0.5264851
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-7.6280000	0.0656836	3	-1.4914435
HillSlope	-1.8370000	0.1539556	3	-14.5160021
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=E2-TC Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.7745667	0.0182793	3	4.0875441
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.9860000	.	1	.
HillSlope	-1.7540000	.	1	.
okr2	0	0	3	.

----- Chemical=E2-TC Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9926667	0.0023849	3	0.4161295
bind	100.0000000	0	3	0
Logic50	-7.9416667	0.0509782	3	-1.1118176
HillSlope	-1.4706667	0.1876249	3	-22.0971824
okr2	100.0000000	0	3	0

----- Chemical=E2-TC Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	40.0000000	24.4948974	5	136.9306394
compete50	40.0000000	24.4948974	5	136.9306394
r2	0.9922000	0.0031000	2	0.4418527
bind	40.0000000	24.4948974	5	136.9306394
Logic50	-9.2290000	0.1320000	2	-2.0227131
HillSlope	-1.1637500	0.4062500	2	-49.3683574
okr2	40.0000000	24.4948974	5	136.9306394

----- Chemical=E2-TC Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9272333	0.0381793	3	7.1318037
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.9960000	.	1	.
HillSlope	-3.4750000	.	1	.
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=EE2 Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9417333	0.0125263	3	2.3038538
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.5450000	.	1	.
HillSlope	-0.8225000	.	1	.
okr2	100.0000000	0	3	0

----- Chemical=EE2 Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9913333	0.0014075	3	0.2459208
bind	100.0000000	0	3	0
Logic50	-8.7483333	0.0789226	3	-1.5625601
HillSlope	-1.2576667	0.0168951	3	-2.3267830
okr2	100.0000000	0	3	0

----- Chemical=EE2 Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9851667	0.0069066	3	1.2142697
bind	100.0000000	0	3	0
Logic50	-7.6763333	0.1034494	3	-2.3341823
HillSlope	-1.3011667	0.2546616	3	-33.8993330
okr2	100.0000000	0	3	0

----- Chemical=EE2 Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	0.7604333	0.0527150	3	12.0069843
bind	0	0	6	.
Logic50	-9.5565000	1.3235000	2	-19.5857443
HillSlope	-0.6813333	0.0211268	3	-5.3707438
okr2	0	0	6	.

----- Chemical=EE2 Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9781667	0.0112265	3	1.9878902
bind	100.0000000	0	3	0
Logic50	-7.9253333	0.3361767	3	-7.3470113
HillSlope	-1.5320000	0.3724889	3	-42.1129076
okr2	100.0000000	0	3	0

----- Chemical=ELactone Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9305667	0.0110339	3	2.0537315
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-3.4620000	0.0819024	3	-4.0976050
HillSlope	-1.4910000	0.2764616	3	-32.1157268
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=ELactone Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9882333	0.0060557	3	1.0613611
bind	100.0000000	0	3	0
Logic50	-4.3423333	0.0128106	3	-0.5109830
HillSlope	-0.7571667	0.0373333	3	-8.5401581
okr2	100.0000000	0	3	0

----- Chemical=ELactone Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=ELactone Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9301000	.	1	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-3.5700000	.	1	.
HillSlope	-0.8784000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=ELactone Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=Equol Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9408000	0.0079589	3	1.4652569
bind	100.0000000	0	3	0
Logic50	-6.5913333	0.0475020	3	-1.2482445
HillSlope	-1.2420000	0.0450925	3	-6.2884458
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9940667	0.000837324	3	0.1458944
bind	100.0000000	0	3	0
Logic50	-6.5590000	0.0219393	3	-0.5793566
HillSlope	-1.0040333	0.0326859	3	-5.6386208
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9926667	0.0010914	3	0.1904291
bind	100.0000000	0	3	0
Logic50	-5.4016667	0.0466238	3	-1.4949973
HillSlope	-1.0970000	0.0220076	3	-3.4747709
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	20.0000000	20.0000000	5	223.6067977
compete50	20.0000000	20.0000000	5	223.6067977
r2	0.9125000	0.0744000	2	11.5306837
bind	20.0000000	20.0000000	5	223.6067977
Logic50	-6.5430000	.	1	.
HillSlope	-1.1490000	.	1	.
okr2	20.0000000	20.0000000	5	223.6067977

----- Chemical=Equol Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9741000	0.0058158	3	1.0341065
bind	100.0000000	0	3	0
Logic50	-5.4663333	0.2960756	3	-9.3813897
HillSlope	-1.0229667	0.1526130	3	-25.8398945
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9067667	0.0265653	3	5.0743402
bind	100.0000000	0	3	0
Logic50	-6.5636667	0.1659220	3	-4.3784268
HillSlope	-1.2806667	0.0695038	3	-9.4001125
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Gen Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9774333	0.0042262	3	0.7489067
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9743667	0.0085560	3	1.5209220
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.8990000	0.0110000	2	-0.3175413
HillSlope	-1.2925000	0.1955000	2	-21.3910059
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9119000	0.0676000	2	10.4836974
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-5.0520000	.	1	.
HillSlope	-0.7879000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Gen Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9547667	0.0156933	3	2.8469440
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.9235000	0.3055000	2	-8.7751040
HillSlope	-1.4701500	0.5198500	2	-50.0070687
okr2	100.0000000	0	3	0

----- Chemical=Heptylph Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	100.0000000	0	4	0
r2	0.9527250	0.0305669	4	6.4167318
bind	100.0000000	0	4	0
Logic50	-4.0120000	0.4152559	4	-20.7006952
HillSlope	-0.7892750	0.1354353	4	-34.3189053
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=Heptylph Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9361000	0.0553504	3	10.2413899
bind	100.0000000	0	3	0
Logic50	-4.2550000	0.0312143	3	-1.2706175
HillSlope	-0.5812667	0.1166985	3	-34.7736679
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Heptylph Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Heptylph Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Heptylph Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	14.2857143	14.2857143	7	264.5751311
compete50	14.2857143	14.2857143	7	264.5751311
r2	0.8650000	.	1	.
bind	14.2857143	14.2857143	7	264.5751311
Logic50	-3.2540000	.	1	.
HillSlope	-0.8274000	.	1	.
okr2	0	0	7	.

----- Chemical=Hexestro Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9934333	0.000384419	3	0.0670234
bind	100.0000000	0	3	0
Logic50	-8.2186667	0.1286913	3	-2.7121167
HillSlope	-1.1501000	0.1305249	3	-19.6570487
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9975667	0.0010105	3	0.1754507
bind	100.0000000	0	3	0
Logic50	-8.0096667	0.0655396	3	-1.4172623
HillSlope	-1.0573333	0.0356199	3	-5.8350084
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9850333	0.0059173	3	1.0404790
bind	100.0000000	0	3	0
Logic50	-6.8083333	0.0509946	3	-1.2973095
HillSlope	-1.2686667	0.0647156	3	-8.8353182
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	28.5714286	18.4427778	7	170.7825128
compete50	42.8571429	20.2030509	7	124.7219129
r2	0.7103800	0.1010358	5	31.8031179
bind	42.8571429	20.2030509	7	124.7219129
Logic50	-8.6575000	0.5595121	4	-12.9254881
HillSlope	-0.5332250	0.1462316	4	-54.8479993
okr2	14.2857143	14.2857143	7	264.5751311

----- Chemical=Hexestro Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9752000	0.0129063	3	2.2922906
bind	100.0000000	0	3	0
Logic50	-7.1226667	0.1725518	3	-4.1960186
HillSlope	-1.3637667	0.2996482	3	-38.0567989
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Geetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9312500	0.0093457	4	2.0071347
bind	100.0000000	0	4	0
Logic50	-4.4250000	0.3173571	4	-14.3438217
HillSlope	-0.9403500	0.0725851	4	-15.4378815
okr2	100.0000000	0	4	0

----- Chemical=Kepone Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9936667	0.0034863	3	0.6076975
bind	100.0000000	0	3	0
Logic50	-5.1553333	0.0645403	3	-2.1683758
HillSlope	-0.9617667	0.1637292	3	-29.4860824
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9705667	0.0137455	3	2.4529837
bind	100.0000000	0	3	0
Logic50	-3.8343333	0.0674940	3	-3.0488506
HillSlope	-1.1554667	0.3228005	3	-48.3879768
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9532333	0.0200777	3	3.6481744
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.4480000	0.0280000	2	-0.8902424
HillSlope	-0.5684000	0.0031000	2	-0.7712987
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	7	0
compete50	100.0000000	0	7	0
r2	0.9291857	0.0322031	7	9.1694776
bind	100.0000000	0	7	0
Logic50	-3.6415714	0.0674106	7	-4.8976543
HillSlope	-0.7981286	0.0916351	7	-30.3765282
okr2	85.7142857	14.2857143	7	44.0958552

----- Chemical=NE Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	11	0
compete50	100.0000000	0	11	0
r2	0.9842000	0.0064307	11	2.1670497
bind	81.8181818	12.1967344	11	49.4413232
Logic50	-5.7061111	0.1355920	9	-7.1287759
HillSlope	-0.9110444	0.0867124	9	-28.5537263
okr2	100.0000000	0	11	0

----- Chemical=NE Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	93.3333333	6.6666667	15	27.6641668
compete50	93.3333333	6.6666667	15	27.6641668
r2	0.9733733	0.0234729	15	9.3396877
bind	93.3333333	6.6666667	15	27.6641668
Logic50	-6.5691333	0.0260289	15	-1.5345934
HillSlope	-1.0290333	0.0513056	15	-19.3099402
okr2	93.3333333	6.6666667	15	27.6641668

----- Chemical=NE Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	16	0
compete50	100.0000000	0	16	0
r2	0.9890938	0.0025032	16	1.0123162
bind	100.0000000	0	16	0
Logic50	-6.1871250	0.0387590	16	-2.5057819
HillSlope	-1.0392688	0.0421627	16	-16.2278239
okr2	100.0000000	0	16	0

----- Chemical=NE Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.4761905	6.5638327	21	33.2454983
compete50	90.4761905	6.5638327	21	33.2454983
r2	0.9590750	0.0101612	20	4.7381448
bind	90.4761905	6.5638327	21	33.2454983
Logic50	-5.9291500	0.0703901	20	-5.3092610
HillSlope	-0.8694350	0.0268721	20	-13.8222806
okr2	80.9523810	8.7805185	21	49.7050122

----- Chemical=NE Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	23	0
compete50	100.0000000	0	23	0
r2	0.9654435	0.0053326	23	2.6489499
bind	100.0000000	0	23	0
Logic50	-6.2390870	0.0715320	23	-5.4984869
HillSlope	-1.0545217	0.0442056	23	-20.1041586
okr2	95.6521739	4.3478261	23	21.7992342

----- Chemical=NE-TC Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9782500	0.0165168	4	3.3768023
bind	100.0000000	0	4	0
Logic50	-5.5460000	0.7965508	4	-28.7252360
HillSlope	-1.3527500	0.2461749	4	-36.3962094
okr2	100.0000000	0	4	0

----- Chemical=NE-TC Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9957000	0.000984886	3	0.1713239
bind	100.0000000	0	3	0
Logic50	-6.1160000	0.0232881	3	-0.6595175
HillSlope	-1.0696667	0.0402506	3	-6.5175529
okr2	100.0000000	0	3	0

----- Chemical=NE-TC Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9905333	0.0034940	3	0.6109559
bind	100.0000000	0	3	0
Logic50	-5.4560000	0.0877572	3	-2.7859238
HillSlope	-0.9925667	0.0630459	3	-11.0016523
okr2	100.0000000	0	3	0

----- Chemical=NE-TC Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9584000	0.0165500	3	2.9909729
bind	100.0000000	0	3	0
Logic50	-6.2346667	0.0472382	3	-1.3123221
HillSlope	-0.9986000	0.1290146	3	-22.3773077
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9939500	0.000950000	2	0.1351681
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-5.4125000	0.0535000	2	-1.3978832
HillSlope	-1.0192500	0.0447500	2	-6.2090809
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=NPhenol Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9968667	0.000966667	3	0.1679578
bind	100.0000000	0	3	0
Logic50	-5.6810000	0.0438786	3	-1.3377926
HillSlope	-0.8489000	0.0573786	3	-11.7072263
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9855000	0.0064211	3	1.1285237
bind	100.0000000	0	3	0
Logic50	-4.5436667	0.0412890	3	-1.5739396
HillSlope	-0.9602000	0.0402414	3	-7.2589268
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	100.0000000	0	3	0
r2	0.8170333	0.0616431	3	13.0678844
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.1620000	0.2370000	2	-8.0530662
HillSlope	-0.9151500	0.3118500	2	-48.1912801
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=NPhenol Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9854667	0.000993870	3	0.1746821
bind	100.0000000	0	3	0
Logic50	-4.5890000	0.2232696	3	-8.4269855
HillSlope	-0.8540667	0.0582290	3	-11.8088739
okr2	100.0000000	0	3	0

----- Chemical=Nethdrel Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9644667	0.0280941	3	5.0453263
bind	100.0000000	0	3	0
Logic50	-6.1026667	0.2118068	3	-6.0114720
HillSlope	-0.8668333	0.1223671	3	-24.4506101
okr2	100.0000000	0	3	0

----- Chemical=OTES Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=OTES Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=OTES Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=OTES Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=OTES Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=Progeste Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.9843000	.	1	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-4.5510000	.	1	.
HillSlope	-1.0280000	.	1	.
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=Progesterone Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Progesterone Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Progesterone Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=Progeste Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=Tamox Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	100.0000000	0	4	0
r2	0.8368250	0.0979664	4	23.4138261
bind	100.0000000	0	4	0
Logic50	-6.8655000	0.2228080	4	-6.4906570
HillSlope	-1.6097500	0.1859988	4	-23.1090323
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=Tamox Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9352667	0.0620839	3	11.4975154
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-7.5405000	0.0855000	2	-1.6035443
HillSlope	-1.0725000	0.0155000	2	-2.0438518
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Tamox Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9935667	0.0022637	3	0.3946272
bind	100.0000000	0	3	0
Logic50	-5.8500000	0.0870019	3	-2.5759272
HillSlope	-1.1003000	0.1700947	3	-26.7756590
okr2	100.0000000	0	3	0

----- Chemical=Tamox Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9718000	0.0093408	3	1.6648168
bind	100.0000000	0	3	0
Logic50	-8.9630000	0.1806018	3	-3.4900306
HillSlope	-0.6809333	0.0207440	3	-5.2765371
okr2	100.0000000	0	3	0

----- Chemical=Tamox Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.8919000	0.1007335	3	19.5622331
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-7.6505000	0.0335000	2	-0.6192557
HillSlope	-0.9744000	0.0566000	2	-8.2147463
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Zear Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.8992333	0.0339366	3	6.5366746
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-6.9730000	0.1723959	3	-4.2822084
HillSlope	-1.6296667	0.1199796	3	-12.7517373
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=Zear Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.8970000	0.0035445	3	0.6844167
bind	100.0000000	0	3	0
Logic50	-7.0920000	0.0155671	3	-0.3801881
HillSlope	-1.5173333	0.0307155	3	-3.5062090
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Zear Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9933333	0.0020185	3	0.3519653
bind	100.0000000	0	3	0
Logic50	-5.9146667	0.0558937	3	-1.6367924
HillSlope	-1.3636667	0.1804442	3	-22.9189830
okr2	100.0000000	0	3	0

----- Chemical=Zear Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9595750	0.0255434	4	5.3239000
bind	100.0000000	0	4	0
Logic50	-7.5295000	0.2150355	4	-5.7118125
HillSlope	-0.7138000	0.0883591	4	-24.7573848
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=Zear Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9778000	0.0045611	3	0.8079362
bind	100.0000000	0	3	0
Logic50	-7.2743333	0.0929952	3	-2.2142572
HillSlope	-0.9721333	0.0615821	3	-10.9720824
okr2	100.0000000	0	3	0

----- Chemical=17EE Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	.	1	.
compete50	100.0000000	.	1	.
r2	0.9849000	.	1	.
bind	100.0000000	.	1	.
Logic50	-9.3930000	.	1	.
HillSlope	-0.7812000	.	1	.
okr2	100.0000000	.	1	.

----- Chemical=Atr Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Atr Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Atr Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Atr Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=Atr Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=BPA Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9687000	0.0164667	4	3.3997593
bind	100.0000000	0	4	0
Logic50	-5.7470000	0.5666714	4	-19.7205993
HillSlope	-0.9909000	0.0849468	4	-17.1453824
okr2	100.0000000	0	4	0

----- Chemical=BPA Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9922667	0.0026422	3	0.4612055
bind	100.0000000	0	3	0
Logic50	-5.7586667	0.0359645	3	-1.0817143
HillSlope	-0.8723000	0.0111002	3	-2.2040610
okr2	100.0000000	0	3	0

----- Chemical=BPA Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9035250	0.0832532	4	18.4285309
bind	100.0000000	0	4	0
Logic50	-4.5967500	0.0430569	4	-1.8733623
HillSlope	-1.2116500	0.1596040	4	-26.3448942
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=BPA Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9806000	0.0050254	4	1.0249715
bind	100.0000000	0	4	0
Logic50	-5.1112500	0.2488066	4	-9.7356463
HillSlope	-0.8321250	0.0656940	4	-15.7894559
okr2	100.0000000	0	4	0

----- Chemical=BPA Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9717667	0.0120985	3	2.1564096
bind	100.0000000	0	3	0
Logic50	-5.4790000	0.1754451	3	-5.5462659
HillSlope	-0.7343000	0.0464346	3	-10.9528868
okr2	100.0000000	0	3	0

----- Chemical=BaA Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.9781000	.	1	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-3.7650000	.	1	.
HillSlope	-0.6319000	.	1	.
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=BaA Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=BaA Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=BaA Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	0.6933000	.	1	.
bind	0	0	4	.
Logic50	-5.5550000	.	1	.
HillSlope	-0.5503000	.	1	.
okr2	0	0	4	.

----- Chemical=BaA Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=ButylPar Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9494000	0.0048014	3	0.8759479
bind	100.0000000	0	3	0
Logic50	-4.7156667	0.0647182	3	-2.3770806
HillSlope	-0.6580333	0.0239010	3	-6.2911320
okr2	100.0000000	0	3	0

----- Chemical=ButylPar Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9943667	0.000693622	3	0.1208194
bind	100.0000000	0	3	0
Logic50	-4.8206667	0.0685501	3	-2.4629828
HillSlope	-0.6150000	0.0352762	3	-9.9349993
okr2	100.0000000	0	3	0

----- Chemical=ButylPar Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	100.0000000	0	3	0
r2	0.8380000	0.1319192	3	27.2662038
bind	100.0000000	0	3	0
Logic50	-3.6363333	0.0684893	3	-3.2622660
HillSlope	-0.8567333	0.3291611	3	-66.5462239
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=ButylPar Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.8731333	0.0478649	3	9.4950473
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-4.0933333	0.0809863	3	-3.4268490
HillSlope	-0.8261333	0.0300873	3	-6.3080368
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=ButylPar Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9082000	0.0170154	3	3.2450464
bind	100.0000000	0	3	0
Logic50	-3.4656667	0.2206855	3	-11.0292945
HillSlope	-0.4759000	0.1358011	3	-49.4251627
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Cort Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	16.6666667	16.6666667	6	244.9489743
compete50	16.6666667	16.6666667	6	244.9489743
r2	0.7789000	.	1	.
bind	16.6666667	16.6666667	6	244.9489743
Logic50	-4.8250000	.	1	.
HillSlope	-0.1495000	.	1	.
okr2	0	0	6	.

----- Chemical=Cort Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=Ceetox Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=DBP Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	.	.	0	.
bind	0	0	6	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	6	.

----- Chemical=DBP Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	9	.
compete50	0	0	9	.
r2	.	.	0	.
bind	0	0	9	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	9	.

----- Chemical=DBP Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	10	.
compete50	0	0	10	.
r2	.	.	0	.
bind	0	0	10	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	10	.

----- Chemical=DBP Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	20.0000000	20.0000000	5	223.6067977
compete50	20.0000000	20.0000000	5	223.6067977
r2	0.7845000	0.1635000	2	29.4740494
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	20.0000000	20.0000000	5	223.6067977

----- Chemical=DBP Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	8	.
compete50	0	0	8	.
r2	.	.	0	.
bind	0	0	8	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	8	.

----- Chemical=DBP Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	8	.
compete50	0	0	8	.
r2	.	.	0	.
bind	0	0	8	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	8	.

----- Chemical=DBP Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	11	.
compete50	0	0	11	.
r2	.	.	0	.
bind	0	0	11	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	11	.

----- Chemical=DBP Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	10	.
compete50	0	0	10	.
r2	.	.	0	.
bind	0	0	10	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	10	.

----- Chemical=DBP-TC Lab=Geetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9564000	0.0259000	2	3.8297921
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-4.0405000	0.8605000	2	-30.1183213
HillSlope	-1.3120000	0.0840000	2	-9.0544161
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=DBP-TC Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9864667	0.0010171	3	0.1785796
bind	100.0000000	0	3	0
Logic50	-3.6880000	0.0986526	3	-4.6331696
HillSlope	-1.4692667	0.5948388	3	-70.1228073
okr2	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP-TC Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.7604500	0.1825500	2	33.9489363
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-4.5900000	.	1	.
HillSlope	-0.6218000	.	1	.
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=DBP-TC Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DDT Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9822667	0.0032199	3	0.5677721
bind	100.0000000	0	3	0
Logic50	-5.2843333	0.0792072	3	-2.5961811
HillSlope	-0.8741000	0.0055185	3	-1.0934953
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9951000	0.0017039	3	0.2965803
bind	100.0000000	0	3	0
Logic50	-5.6113333	0.0430362	3	-1.3283976
HillSlope	-0.9103333	0.0376185	3	-7.1575038
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9820667	0.0059404	3	1.0476876
bind	100.0000000	0	3	0
Logic50	-4.3290000	0.0175594	3	-0.7025598
HillSlope	-0.9466667	0.0222305	3	-4.0673587
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.7656333	0.1149441	3	26.0031760
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-4.2883333	1.1510031	3	-46.4888262
HillSlope	-0.6433000	0.1407113	3	-37.8857738
okr2	0	0	4	.

----- Chemical=DDT Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9552667	0.0096058	3	1.7416821
bind	100.0000000	0	3	0
Logic50	-4.3776667	0.1816813	3	-7.1883344
HillSlope	-0.8202333	0.0841885	3	-17.7777096
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9947667	0.0015169	3	0.2641242
bind	100.0000000	0	3	0
Logic50	-8.6280000	0.1190812	3	-2.3905273
HillSlope	-1.0422333	0.0707089	3	-11.7508696
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9921000	0.0050203	3	0.8764642
bind	100.0000000	0	3	0
Logic50	-8.4733333	0.0204151	3	-0.4173098
HillSlope	-1.0056333	0.1218263	3	-20.9827270
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9875333	0.0051350	3	0.9006284
bind	100.0000000	0	3	0
Logic50	-7.4303333	0.1141408	3	-2.6606825
HillSlope	-1.0744333	0.1233739	3	-19.8886120
okr2	100.0000000	0	3	0

----- Chemical=DES Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	40.0000000	24.4948974	5	136.9306394
compete50	80.0000000	20.0000000	5	55.9016994
r2	0.9316600	0.0338686	5	8.1287641
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-7.9014000	1.0471418	5	-29.6337391
HillSlope	-0.6808800	0.1317380	5	-43.2638747
okr2	40.0000000	24.4948974	5	136.9306394

----- Chemical=DES Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9894333	0.0044968	3	0.7871846
bind	100.0000000	0	3	0
Logic50	-7.8356667	0.2531965	3	-5.5968323
HillSlope	-0.9884333	0.0551766	3	-9.6686978
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9889000	0.0022000	3	0.3853283
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-4.8266667	0.0394982	3	-1.4173956
HillSlope	-1.1853333	0.0256667	3	-3.7505037
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=DHT Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9912000	0.0024379	3	0.4260047
bind	100.0000000	0	3	0
Logic50	-5.4033333	0.0243607	3	-0.7808883
HillSlope	-0.9936333	0.0892538	3	-15.5582597
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9661333	0.0164380	3	2.9469481
bind	100.0000000	0	3	0
Logic50	-4.0906667	0.0629453	3	-2.6652003
HillSlope	-0.9186333	0.1259937	3	-23.7556651
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9192000	0.0531098	4	11.5556656
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-5.8113333	0.7153781	3	-21.3216329
HillSlope	-0.9250667	0.1741997	3	-32.6163152
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=DHT Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9280500	0.0383500	2	5.8439836
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-5.0550000	.	1	.
HillSlope	-0.8116000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=E2 Lab=Ceetox Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9824667	0.0013371	3	0.2357217
bind	100.0000000	0	3	0
Logic50	-8.7643333	0.0140989	3	-0.2786286
HillSlope	-1.1930000	0.0233524	3	-3.3904021
okr2	100.0000000	0	3	0

----- Chemical=E2 Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9719667	0.0100037	3	1.7826696
bind	100.0000000	0	3	0
Logic50	-8.6793333	0.0320017	3	-0.6386278
HillSlope	-0.9886333	0.1507249	3	-26.4064753
okr2	100.0000000	0	3	0

----- Chemical=E2 Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9813800	0.0026571	5	0.6054279
bind	100.0000000	0	5	0
Logic50	-8.8168000	0.1845073	5	-4.6793717
HillSlope	-1.2590000	0.0987836	5	-17.5446266
okr2	100.0000000	0	5	0

----- Chemical=E2 Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9977833	0.0010631	6	0.2609949
bind	100.0000000	0	6	0
Logic50	-9.0216667	0.0202430	6	-0.5496207
HillSlope	-1.1913333	0.0807992	6	-16.6130513
okr2	100.0000000	0	6	0

----- Chemical=E2 Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	9	0
compete50	100.0000000	0	9	0
r2	0.9972222	0.000351891	9	0.1058613
bind	100.0000000	0	9	0
Logic50	-9.0657778	0.0119010	9	-0.3938202
HillSlope	-1.1293333	0.0148595	9	-3.9473361
okr2	100.0000000	0	9	0

----- Chemical=E2 Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9923000	0.0022745	3	0.3970113
bind	100.0000000	0	3	0
Logic50	-8.9673333	0.0093512	3	-0.1806190
HillSlope	-1.3560000	0.0427902	3	-5.4656914
okr2	100.0000000	0	3	0

----- Chemical=E2 Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9752000	0.0091995	3	1.6339137
bind	100.0000000	0	3	0
Logic50	-8.7696667	0.0506305	3	-0.9999758
HillSlope	-1.3120000	0.0889963	3	-11.7489356
okr2	100.0000000	0	3	0

----- Chemical=E2 Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	10	0
compete50	100.0000000	0	10	0
r2	0.9932100	0.000960839	10	0.3059211
bind	100.0000000	0	10	0
Logic50	-8.7883000	0.0206613	10	-0.7434523
HillSlope	-1.3401000	0.0457429	10	-10.7940938
okr2	100.0000000	0	10	0

----- Chemical=E2 Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.8635500	0.0593761	4	13.7516356
bind	100.0000000	0	4	0
Logic50	-9.1812500	0.2207349	4	-4.8083845
HillSlope	-0.8134750	0.1221695	4	-30.0364575
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=E2 Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	8	0
compete50	100.0000000	0	8	0
r2	0.9546750	0.0194409	8	5.7597862
bind	100.0000000	0	8	0
Logic50	-8.5597500	0.1665667	8	-5.5039188
HillSlope	-1.1542500	0.0933172	8	-22.8668743
okr2	87.5000000	12.5000000	8	40.4061018

----- Chemical=E2 Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	8	0
compete50	100.0000000	0	8	0
r2	0.9776750	0.0058043	8	1.6792011
bind	100.0000000	0	8	0
Logic50	-8.8965000	0.0471252	8	-1.4982322
HillSlope	-1.2109375	0.2413283	8	-56.3678507
okr2	100.0000000	0	8	0

----- Chemical=E2 Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	11	0
compete50	100.0000000	0	11	0
r2	0.9787909	0.0053556	11	1.8147519
bind	100.0000000	0	11	0
Logic50	-9.0757273	0.0363381	11	-1.3279353
HillSlope	-1.0976182	0.0569223	11	-17.1999696
okr2	100.0000000	0	11	0

----- Chemical=E2 Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9913000	0.0018520	3	0.3235956
bind	100.0000000	0	3	0
Logic50	-9.0593333	0.0724669	3	-1.3854912
HillSlope	-1.2770000	0.1430606	3	-19.4039323
okr2	100.0000000	0	3	0

----- Chemical=E2 Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	9	0
compete50	100.0000000	0	9	0
r2	0.9810667	0.0054696	9	1.6725586
bind	100.0000000	0	9	0
Logic50	-9.0975556	0.0568126	9	-1.8734456
HillSlope	-1.1353444	0.0715193	9	-18.8980483
okr2	100.0000000	0	9	0

----- Chemical=E2-TC Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9657667	0.0029356	3	0.5264851
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-7.6280000	0.0656836	3	-1.4914435
HillSlope	-1.8370000	0.1539556	3	-14.5160021
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=E2-TC Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.7745667	0.0182793	3	4.0875441
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.9860000	.	1	.
HillSlope	-1.7540000	.	1	.
okr2	0	0	3	.

----- Chemical=E2-TC Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9926667	0.0023849	3	0.4161295
bind	100.0000000	0	3	0
Logic50	-7.9416667	0.0509782	3	-1.1118176
HillSlope	-1.4706667	0.1876249	3	-22.0971824
okr2	100.0000000	0	3	0

----- Chemical=E2-TC Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	40.0000000	24.4948974	5	136.9306394
compete50	40.0000000	24.4948974	5	136.9306394
r2	0.9922000	0.0031000	2	0.4418527
bind	40.0000000	24.4948974	5	136.9306394
Logic50	-9.2290000	0.1320000	2	-2.0227131
HillSlope	-1.1637500	0.4062500	2	-49.3683574
okr2	40.0000000	24.4948974	5	136.9306394

----- Chemical=E2-TC Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9272333	0.0381793	3	7.1318037
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.9960000	.	1	.
HillSlope	-3.4750000	.	1	.
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=EE2 Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9417333	0.0125263	3	2.3038538
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.5450000	.	1	.
HillSlope	-0.8225000	.	1	.
okr2	100.0000000	0	3	0

----- Chemical=EE2 Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9913333	0.0014075	3	0.2459208
bind	100.0000000	0	3	0
Logic50	-8.7483333	0.0789226	3	-1.5625601
HillSlope	-1.2576667	0.0168951	3	-2.3267830
okr2	100.0000000	0	3	0

----- Chemical=EE2 Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9851667	0.0069066	3	1.2142697
bind	100.0000000	0	3	0
Logic50	-7.6763333	0.1034494	3	-2.3341823
HillSlope	-1.3011667	0.2546616	3	-33.8993330
okr2	100.0000000	0	3	0

----- Chemical=EE2 Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	0.7604333	0.0527150	3	12.0069843
bind	0	0	6	.
Logic50	-9.5565000	1.3235000	2	-19.5857443
HillSlope	-0.6813333	0.0211268	3	-5.3707438
okr2	0	0	6	.

----- Chemical=EE2 Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9781667	0.0112265	3	1.9878902
bind	100.0000000	0	3	0
Logic50	-7.9253333	0.3361767	3	-7.3470113
HillSlope	-1.5320000	0.3724889	3	-42.1129076
okr2	100.0000000	0	3	0

----- Chemical=ELactone Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9305667	0.0110339	3	2.0537315
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-3.4620000	0.0819024	3	-4.0976050
HillSlope	-1.4910000	0.2764616	3	-32.1157268
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=ELactone Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9882333	0.0060557	3	1.0613611
bind	100.0000000	0	3	0
Logic50	-4.3423333	0.0128106	3	-0.5109830
HillSlope	-0.7571667	0.0373333	3	-8.5401581
okr2	100.0000000	0	3	0

----- Chemical=ELactone Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=ELactone Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9301000	.	1	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-3.5700000	.	1	.
HillSlope	-0.8784000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=ELactone Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=Equol Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9408000	0.0079589	3	1.4652569
bind	100.0000000	0	3	0
Logic50	-6.5913333	0.0475020	3	-1.2482445
HillSlope	-1.2420000	0.0450925	3	-6.2884458
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9940667	0.000837324	3	0.1458944
bind	100.0000000	0	3	0
Logic50	-6.5590000	0.0219393	3	-0.5793566
HillSlope	-1.0040333	0.0326859	3	-5.6386208
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9926667	0.0010914	3	0.1904291
bind	100.0000000	0	3	0
Logic50	-5.4016667	0.0466238	3	-1.4949973
HillSlope	-1.0970000	0.0220076	3	-3.4747709
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	20.0000000	20.0000000	5	223.6067977
compete50	20.0000000	20.0000000	5	223.6067977
r2	0.9125000	0.0744000	2	11.5306837
bind	20.0000000	20.0000000	5	223.6067977
Logic50	-6.5430000	.	1	.
HillSlope	-1.1490000	.	1	.
okr2	20.0000000	20.0000000	5	223.6067977

----- Chemical=Equol Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9741000	0.0058158	3	1.0341065
bind	100.0000000	0	3	0
Logic50	-5.4663333	0.2960756	3	-9.3813897
HillSlope	-1.0229667	0.1526130	3	-25.8398945
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9067667	0.0265653	3	5.0743402
bind	100.0000000	0	3	0
Logic50	-6.5636667	0.1659220	3	-4.3784268
HillSlope	-1.2806667	0.0695038	3	-9.4001125
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Gen Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9774333	0.0042262	3	0.7489067
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9743667	0.0085560	3	1.5209220
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.8990000	0.0110000	2	-0.3175413
HillSlope	-1.2925000	0.1955000	2	-21.3910059
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9119000	0.0676000	2	10.4836974
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-5.0520000	.	1	.
HillSlope	-0.7879000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Gen Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9547667	0.0156933	3	2.8469440
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.9235000	0.3055000	2	-8.7751040
HillSlope	-1.4701500	0.5198500	2	-50.0070687
okr2	100.0000000	0	3	0

----- Chemical=Heptylph Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	100.0000000	0	4	0
r2	0.9527250	0.0305669	4	6.4167318
bind	100.0000000	0	4	0
Logic50	-4.0120000	0.4152559	4	-20.7006952
HillSlope	-0.7892750	0.1354353	4	-34.3189053
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=Heptylph Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9361000	0.0553504	3	10.2413899
bind	100.0000000	0	3	0
Logic50	-4.2550000	0.0312143	3	-1.2706175
HillSlope	-0.5812667	0.1166985	3	-34.7736679
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Heptylph Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Heptylph Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Heptylph Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	14.2857143	14.2857143	7	264.5751311
compete50	14.2857143	14.2857143	7	264.5751311
r2	0.8650000	.	1	.
bind	14.2857143	14.2857143	7	264.5751311
Logic50	-3.2540000	.	1	.
HillSlope	-0.8274000	.	1	.
okr2	0	0	7	.

----- Chemical=Hexestro Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9934333	0.000384419	3	0.0670234
bind	100.0000000	0	3	0
Logic50	-8.2186667	0.1286913	3	-2.7121167
HillSlope	-1.1501000	0.1305249	3	-19.6570487
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9975667	0.0010105	3	0.1754507
bind	100.0000000	0	3	0
Logic50	-8.0096667	0.0655396	3	-1.4172623
HillSlope	-1.0573333	0.0356199	3	-5.8350084
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9850333	0.0059173	3	1.0404790
bind	100.0000000	0	3	0
Logic50	-6.8083333	0.0509946	3	-1.2973095
HillSlope	-1.2686667	0.0647156	3	-8.8353182
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	28.5714286	18.4427778	7	170.7825128
compete50	42.8571429	20.2030509	7	124.7219129
r2	0.7103800	0.1010358	5	31.8031179
bind	42.8571429	20.2030509	7	124.7219129
Logic50	-8.6575000	0.5595121	4	-12.9254881
HillSlope	-0.5332250	0.1462316	4	-54.8479993
okr2	14.2857143	14.2857143	7	264.5751311

----- Chemical=Hexestro Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9752000	0.0129063	3	2.2922906
bind	100.0000000	0	3	0
Logic50	-7.1226667	0.1725518	3	-4.1960186
HillSlope	-1.3637667	0.2996482	3	-38.0567989
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Geetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9312500	0.0093457	4	2.0071347
bind	100.0000000	0	4	0
Logic50	-4.4250000	0.3173571	4	-14.3438217
HillSlope	-0.9403500	0.0725851	4	-15.4378815
okr2	100.0000000	0	4	0

----- Chemical=Kepone Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9936667	0.0034863	3	0.6076975
bind	100.0000000	0	3	0
Logic50	-5.1553333	0.0645403	3	-2.1683758
HillSlope	-0.9617667	0.1637292	3	-29.4860824
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9705667	0.0137455	3	2.4529837
bind	100.0000000	0	3	0
Logic50	-3.8343333	0.0674940	3	-3.0488506
HillSlope	-1.1554667	0.3228005	3	-48.3879768
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9532333	0.0200777	3	3.6481744
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.4480000	0.0280000	2	-0.8902424
HillSlope	-0.5684000	0.0031000	2	-0.7712987
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	7	0
compete50	100.0000000	0	7	0
r2	0.9291857	0.0322031	7	9.1694776
bind	100.0000000	0	7	0
Logic50	-3.6415714	0.0674106	7	-4.8976543
HillSlope	-0.7981286	0.0916351	7	-30.3765282
okr2	85.7142857	14.2857143	7	44.0958552

----- Chemical=NE Lab=Ceetox Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9937333	0.0013618	3	0.2373546
bind	100.0000000	0	3	0
Logic50	-5.8420000	0.0606822	3	-1.7991220
HillSlope	-0.9306333	0.0357059	3	-6.6454217
okr2	100.0000000	0	3	0

----- Chemical=NE Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9714000	0.0238502	3	4.2525926
bind	100.0000000	0	3	0
Logic50	-5.8483333	0.2127066	3	-6.2995502
HillSlope	-0.7778333	0.2671983	3	-59.4987466
okr2	100.0000000	0	3	0

----- Chemical=NE Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9861600	0.0041315	5	0.9368052
bind	60.0000000	24.4948974	5	91.2870929
Logic50	-5.4280000	0.3371592	3	-10.7586014
HillSlope	-1.0246667	0.0451565	3	-7.6330563
okr2	100.0000000	0	5	0

----- Chemical=NE Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9967333	0.000815952	6	0.2005217
bind	100.0000000	0	6	0
Logic50	-6.4803333	0.0421131	6	-1.5918247
HillSlope	-0.9979167	0.0127407	6	-3.1273255
okr2	100.0000000	0	6	0

----- Chemical=NE Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	88.8888889	11.1111111	9	37.5000000
compete50	88.8888889	11.1111111	9	37.5000000
r2	0.9578000	0.0391273	9	12.2553618
bind	88.8888889	11.1111111	9	37.5000000
Logic50	-6.6283333	0.0119117	9	-0.5391270
HillSlope	-1.0497778	0.0864600	9	-24.7080731
okr2	88.8888889	11.1111111	9	37.5000000

----- Chemical=NE Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9879000	0.0024173	3	0.4238166
bind	100.0000000	0	3	0
Logic50	-6.1810000	0.0535008	3	-1.4992083
HillSlope	-0.8458667	0.0641062	3	-13.1267904
okr2	100.0000000	0	3	0

----- Chemical=NE Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9749667	0.0099399	3	1.7658417
bind	100.0000000	0	3	0
Logic50	-6.1600000	0.0864079	3	-2.4295934
HillSlope	-1.1475000	0.0956770	3	-14.4416017
okr2	100.0000000	0	3	0

----- Chemical=NE Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	10	0
compete50	100.0000000	0	10	0
r2	0.9936900	0.000828043	10	0.2635130
bind	100.0000000	0	10	0
Logic50	-6.1971000	0.0572766	10	-2.9227307
HillSlope	-1.0648200	0.0463297	10	-13.7588978
okr2	100.0000000	0	10	0

----- Chemical=NE Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	20.0000000	5	55.9016994
compete50	80.0000000	20.0000000	5	55.9016994
r2	0.9817400	0.0013314	5	0.3032452
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-6.1392000	0.2100518	5	-7.6506712
HillSlope	-0.8501600	0.0254087	5	-6.6829361
okr2	80.0000000	20.0000000	5	55.9016994

----- Chemical=NE Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	87.5000000	12.5000000	8	40.4061018
compete50	87.5000000	12.5000000	8	40.4061018
r2	0.9241571	0.0226154	7	6.4745202
bind	87.5000000	12.5000000	8	40.4061018
Logic50	-5.6961429	0.0849267	7	-3.9446856
HillSlope	-0.8703714	0.0708140	7	-21.5259972
okr2	62.5000000	18.2981264	8	82.8078671

----- Chemical=NE Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	8	0
compete50	100.0000000	0	8	0
r2	0.9754625	0.0089311	8	2.5896410
bind	100.0000000	0	8	0
Logic50	-6.0017500	0.0312340	8	-1.4719554
HillSlope	-0.8806625	0.0292782	8	-9.4032761
okr2	100.0000000	0	8	0

----- Chemical=NE Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	11	0
compete50	100.0000000	0	11	0
r2	0.9641364	0.0096543	11	3.3210683
bind	100.0000000	0	11	0
Logic50	-6.1023636	0.0749472	11	-4.0733664
HillSlope	-0.9205727	0.0422824	11	-15.2334496
okr2	90.9090909	9.0909091	11	33.1662479

----- Chemical=NE Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9758333	0.0044983	3	0.7984186
bind	100.0000000	0	3	0
Logic50	-5.9140000	0.1110135	3	-3.2512858
HillSlope	-1.1314333	0.1068076	3	-16.3505981
okr2	100.0000000	0	3	0

----- Chemical=NE Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	9	0
compete50	100.0000000	0	9	0
r2	0.9635778	0.0071111	9	2.2139549
bind	100.0000000	0	9	0
Logic50	-6.5145556	0.0980132	9	-4.5135786
HillSlope	-1.1926000	0.0684131	9	-17.2094011
okr2	100.0000000	0	9	0

----- Chemical=NE-TC Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9782500	0.0165168	4	3.3768023
bind	100.0000000	0	4	0
Logic50	-5.5460000	0.7965508	4	-28.7252360
HillSlope	-1.3527500	0.2461749	4	-36.3962094
okr2	100.0000000	0	4	0

----- Chemical=NE-TC Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9957000	0.000984886	3	0.1713239
bind	100.0000000	0	3	0
Logic50	-6.1160000	0.0232881	3	-0.6595175
HillSlope	-1.0696667	0.0402506	3	-6.5175529
okr2	100.0000000	0	3	0

----- Chemical=NE-TC Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9905333	0.0034940	3	0.6109559
bind	100.0000000	0	3	0
Logic50	-5.4560000	0.0877572	3	-2.7859238
HillSlope	-0.9925667	0.0630459	3	-11.0016523
okr2	100.0000000	0	3	0

----- Chemical=NE-TC Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9584000	0.0165500	3	2.9909729
bind	100.0000000	0	3	0
Logic50	-6.2346667	0.0472382	3	-1.3123221
HillSlope	-0.9986000	0.1290146	3	-22.3773077
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9939500	0.000950000	2	0.1351681
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-5.4125000	0.0535000	2	-1.3978832
HillSlope	-1.0192500	0.0447500	2	-6.2090809
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=NPhenol Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9968667	0.000966667	3	0.1679578
bind	100.0000000	0	3	0
Logic50	-5.6810000	0.0438786	3	-1.3377926
HillSlope	-0.8489000	0.0573786	3	-11.7072263
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9855000	0.0064211	3	1.1285237
bind	100.0000000	0	3	0
Logic50	-4.5436667	0.0412890	3	-1.5739396
HillSlope	-0.9602000	0.0402414	3	-7.2589268
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	100.0000000	0	3	0
r2	0.8170333	0.0616431	3	13.0678844
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.1620000	0.2370000	2	-8.0530662
HillSlope	-0.9151500	0.3118500	2	-48.1912801
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=NPhenol Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9854667	0.000993870	3	0.1746821
bind	100.0000000	0	3	0
Logic50	-4.5890000	0.2232696	3	-8.4269855
HillSlope	-0.8540667	0.0582290	3	-11.8088739
okr2	100.0000000	0	3	0

----- Chemical=Nethdrel Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9644667	0.0280941	3	5.0453263
bind	100.0000000	0	3	0
Logic50	-6.1026667	0.2118068	3	-6.0114720
HillSlope	-0.8668333	0.1223671	3	-24.4506101
okr2	100.0000000	0	3	0

----- Chemical=OTES Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=OTES Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=OTES Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=OTES Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=OTES Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=Progeste Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.9843000	.	1	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-4.5510000	.	1	.
HillSlope	-1.0280000	.	1	.
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=Progeste Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Progeste Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Progeste Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=Progeste Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.

----- Chemical=Tamox Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	100.0000000	0	4	0
r2	0.8368250	0.0979664	4	23.4138261
bind	100.0000000	0	4	0
Logic50	-6.8655000	0.2228080	4	-6.4906570
HillSlope	-1.6097500	0.1859988	4	-23.1090323
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=Tamox Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9352667	0.0620839	3	11.4975154
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-7.5405000	0.0855000	2	-1.6035443
HillSlope	-1.0725000	0.0155000	2	-2.0438518
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Tamox Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9935667	0.0022637	3	0.3946272
bind	100.0000000	0	3	0
Logic50	-5.8500000	0.0870019	3	-2.5759272
HillSlope	-1.1003000	0.1700947	3	-26.7756590
okr2	100.0000000	0	3	0

----- Chemical=Tamox Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9718000	0.0093408	3	1.6648168
bind	100.0000000	0	3	0
Logic50	-8.9630000	0.1806018	3	-3.4900306
HillSlope	-0.6809333	0.0207440	3	-5.2765371
okr2	100.0000000	0	3	0

----- Chemical=Tamox Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.8919000	0.1007335	3	19.5622331
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-7.6505000	0.0335000	2	-0.6192557
HillSlope	-0.9744000	0.0566000	2	-8.2147463
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Zear Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.8992333	0.0339366	3	6.5366746
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-6.9730000	0.1723959	3	-4.2822084
HillSlope	-1.6296667	0.1199796	3	-12.7517373
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=Zear Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.8970000	0.0035445	3	0.6844167
bind	100.0000000	0	3	0
Logic50	-7.0920000	0.0155671	3	-0.3801881
HillSlope	-1.5173333	0.0307155	3	-3.5062090
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Zear Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9933333	0.0020185	3	0.3519653
bind	100.0000000	0	3	0
Logic50	-5.9146667	0.0558937	3	-1.6367924
HillSlope	-1.3636667	0.1804442	3	-22.9189830
okr2	100.0000000	0	3	0

----- Chemical=Zear Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9595750	0.0255434	4	5.3239000
bind	100.0000000	0	4	0
Logic50	-7.5295000	0.2150355	4	-5.7118125
HillSlope	-0.7138000	0.0883591	4	-24.7573848
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=Zear Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9778000	0.0045611	3	0.8079362
bind	100.0000000	0	3	0
Logic50	-7.2743333	0.0929952	3	-2.2142572
HillSlope	-0.9721333	0.0615821	3	-10.9720824
okr2	100.0000000	0	3	0

The following pages include the summary statistics for all the chemicals, negatives and positives run in the FWA rhER binding protocol, first, by laboratory and chemical and then by laboratory, chemical and by task.

----- Chemical=Atr Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Atr Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Atr Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Atr Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Atr Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=Atr Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.
BADFIT90	100.0000000	0	2	0
BADFIT80	100.0000000	0	2	0
BADFIT70	100.0000000	0	2	0
BADFIT60	100.0000000	0	2	0

----- Chemical=Atr Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Atr-2 Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.
BADFIT90	100.0000000	0	2	0
BADFIT80	100.0000000	0	2	0
BADFIT70	100.0000000	0	2	0
BADFIT60	100.0000000	0	2	0

----- Chemical=BPA Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	2	0
compete50	100.0000000	0	2	0
r2	0.9866500	0.0028500	2	0.4085044
bind	100.0000000	0	2	0
Logic50	-5.9090000	0.1270000	2	-3.0395181
HillSlope	-1.2930000	0.2840000	2	-31.0623861
okr2	100.0000000	0	2	0

----- Chemical=BPA Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	2	.
BADFIT80	0	0	2	.
BADFIT70	0	0	2	.
BADFIT60	0	0	2	.

----- Chemical=BPA Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9679333	0.0154773	3	2.7695630
bind	100.0000000	0	3	0
Logic50	-5.7910000	0.3687768	3	-11.0298768
HillSlope	-0.3529667	0.0798588	3	-39.1877145
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=BPA Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9831667	0.0063667	3	1.1216196
bind	100.0000000	0	3	0
Logic50	-6.1423333	0.0886309	3	-2.4992668
HillSlope	-0.9343000	0.0289500	3	-5.3668946
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=BPA Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9055000	0.0737745	4	16.2947515
bind	100.0000000	0	4	0
Logic50	-6.2025000	0.0474069	4	-1.5286393
HillSlope	-1.2357500	0.2714659	4	-43.9354059
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	0	0	4	.

----- Chemical=BPA Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	2	0
compete50	100.0000000	0	2	0
r2	0.9847000	0.0078000	2	1.1202260
bind	100.0000000	0	2	0
Logic50	-6.1070000	0.3200000	2	-7.4103216
HillSlope	-0.8619500	0.3690500	2	-60.5505557
okr2	100.0000000	0	2	0
BADFIT90	0	0	2	.
BADFIT80	0	0	2	.
BADFIT70	0	0	2	.
BADFIT60	0	0	2	.

----- Chemical=BPA Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9890500	0.0025863	4	0.5229953
bind	100.0000000	0	4	0
Logic50	-5.7535000	0.1438729	4	-5.0012312
HillSlope	-0.8934750	0.1095434	4	-24.5207575
okr2	100.0000000	0	4	0

----- Chemical=BPA Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=BaA_DMSO Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.8915000	.	1	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=BaA_DMSO Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-8.7500000	.	1	.
HillSlope	3.1990000	.	1	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=BaA_DMSO Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=BaA_DMSO Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=BaA_Etho Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=BaA_Etho Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=BaA_Etho Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=BaA_Etho Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	.	1	.
compete50	0	.	1	.
r2	.	.	0	.
bind	0	.	1	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	.	1	.
BADFIT90	100.0000000	.	1	.
BADFIT80	100.0000000	.	1	.
BADFIT70	100.0000000	.	1	.
BADFIT60	100.0000000	.	1	.

----- Chemical=BaA_Etho Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=ButylPar Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9551333	0.0099009	3	1.7954413
bind	100.0000000	0	3	0
Logic50	-4.5203333	0.0530859	3	-2.0340856
HillSlope	-0.4745333	0.0363234	3	-13.2580814
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	22.3606798	6	109.5445115
compete50	66.6666667	21.0818511	6	77.4596669
r2	0.9279250	0.0054440	4	1.1733738
bind	66.6666667	21.0818511	6	77.4596669
Logic50	-4.2182500	0.0919578	4	-4.3599956
HillSlope	-0.3297725	0.1551668	4	-94.1053887
okr2	66.6666667	21.0818511	6	77.4596669

----- Chemical=ButylPar Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	33.3333333	21.0818511	6	154.9193338
BADFIT80	33.3333333	21.0818511	6	154.9193338
BADFIT70	33.3333333	21.0818511	6	154.9193338
BADFIT60	33.3333333	21.0818511	6	154.9193338

----- Chemical=ButylPar Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9801333	0.0044487	3	0.7861593
bind	100.0000000	0	3	0
Logic50	-4.6683333	0.0447747	3	-1.6612381
HillSlope	-0.6187000	0.0616119	3	-17.2482616
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9629667	0.0095599	3	1.7194967
bind	100.0000000	0	3	0
Logic50	-4.7693333	0.0314660	3	-1.1427334
HillSlope	-0.4766333	0.0192235	3	-6.9856624
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	21.0818511	6	154.9193338
compete50	83.3333333	16.6666667	6	48.9897949
r2	0.9270600	0.0219282	5	5.2890726
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-5.1726000	0.4544338	5	-19.6447594
HillSlope	-0.8072200	0.1700974	5	-47.1184289
okr2	50.0000000	22.3606798	6	109.5445115
BADFIT90	50.0000000	22.3606798	6	109.5445115
BADFIT80	16.6666667	16.6666667	6	244.9489743
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	16.6666667	16.6666667	6	244.9489743

----- Chemical=ButylPar Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9889000	0.0016099	4	0.3255871
bind	100.0000000	0	4	0
Logic50	-4.1865000	0.0541979	4	-2.5891766
HillSlope	-0.9039000	0.0615991	4	-13.6296377
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Cort Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	21.0818511	6	154.9193338
compete50	33.3333333	21.0818511	6	154.9193338
r2	0.3379000	0	2	0
bind	16.6666667	16.6666667	6	244.9489743
Logic50	-10.3700000	.	1	.
HillSlope	1.3341333	1.2194333	3	158.3140483
okr2	0	0	6	.

----- Chemical=Cort Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=Cort Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	.	.	0	.
bind	0	0	7	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	7	.
BADFIT90	100.0000000	0	7	0
BADFIT80	100.0000000	0	7	0
BADFIT70	100.0000000	0	7	0
BADFIT60	100.0000000	0	7	0

----- Chemical=Cort Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	.	.	0	.
bind	0	0	6	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	6	.
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=Cort Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Cort Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	10	.
compete50	20.0000000	13.3333333	10	210.8185107
r2	0.8939500	0.0263500	2	4.1685248
bind	20.0000000	13.3333333	10	210.8185107
Logic50	-4.2455000	0.0525000	2	-1.7488214
HillSlope	-1.4220000	0.0900000	2	-8.9507187
okr2	10.0000000	10.0000000	10	316.2277660
BADFIT90	90.0000000	10.0000000	10	35.1364184
BADFIT80	80.0000000	13.3333333	10	52.7046277
BADFIT70	80.0000000	13.3333333	10	52.7046277
BADFIT60	80.0000000	13.3333333	10	52.7046277

----- Chemical=Cort Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Cort Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DBP Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	14	.
compete50	0	0	14	.
r2	.	.	0	.
bind	0	0	14	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	14	.
BADFIT90	100.0000000	0	14	0
BADFIT80	100.0000000	0	14	0
BADFIT70	100.0000000	0	14	0
BADFIT60	100.0000000	0	14	0

----- Chemical=DBP Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	16	.
compete50	0	0	16	.
r2	.	.	0	.
bind	0	0	16	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	16	.
BADFIT90	100.0000000	0	16	0
BADFIT80	100.0000000	0	16	0
BADFIT70	100.0000000	0	16	0
BADFIT60	100.0000000	0	16	0

----- Chemical=DBP Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	13	.
compete50	0	0	13	.
r2	-2.6810000	.	1	.
bind	7.6923077	7.6923077	13	360.5551275
Logic50	-6.9880000	.	1	.
HillSlope	3.3310000	.	1	.
okr2	0	0	13	.
BADFIT90	100.0000000	0	13	0
BADFIT80	100.0000000	0	13	0
BADFIT70	100.0000000	0	13	0
BADFIT60	100.0000000	0	13	0

----- Chemical=DBP Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	18	.
compete50	0	0	18	.
r2	.	.	0	.
bind	0	0	18	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	18	.
BADFIT90	100.0000000	0	18	0
BADFIT80	100.0000000	0	18	0
BADFIT70	100.0000000	0	18	0
BADFIT60	100.0000000	0	18	0

----- Chemical=DBP Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	27	.
compete50	3.7037037	3.7037037	27	519.6152423
r2	0.7647000	.	1	.
bind	0	0	27	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	27	.

----- Chemical=DBP Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	27	0
BADFIT80	100.0000000	0	27	0
BADFIT70	96.2962963	3.7037037	27	19.9852016
BADFIT60	96.2962963	3.7037037	27	19.9852016

----- Chemical=DBP Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	22	.
compete50	0	0	22	.
r2	.	.	0	.
bind	0	0	22	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	22	.
BADFIT90	100.0000000	0	22	0
BADFIT80	100.0000000	0	22	0
BADFIT70	100.0000000	0	22	0
BADFIT60	100.0000000	0	22	0

----- Chemical=DBP-TC Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DBP-TC Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=DBP-TC Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DDT Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9807000	0.000655744	3	0.1158134
bind	100.0000000	0	3	0
Logic50	-6.0626667	0.4069653	3	-11.6266432
HillSlope	-1.4495333	0.4299241	3	-51.3717351
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DDT Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	21.0818511	6	154.9193338
compete50	83.3333333	16.6666667	6	48.9897949
r2	0.8569000	0.0459371	5	11.9872241
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-5.2490000	0.0368877	5	-1.5714104
HillSlope	-0.5813800	0.1725660	5	-66.3712652
okr2	33.3333333	21.0818511	6	154.9193338
BADFIT90	66.6666667	21.0818511	6	77.4596669
BADFIT80	50.0000000	22.3606798	6	109.5445115
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	16.6666667	16.6666667	6	244.9489743

----- Chemical=DDT Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.3333333	16.6666667	6	48.9897949
compete50	100.0000000	0	6	0
r2	0.9025667	0.0873598	6	23.7087213
bind	100.0000000	0	6	0
Logic50	-5.9230000	0.0553239	6	-2.2879506
HillSlope	-0.8365417	0.1823752	6	-53.4015315
okr2	83.3333333	16.6666667	6	48.9897949

----- Chemical=DDT Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	16.6666667	16.6666667	6	244.9489743
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	16.6666667	16.6666667	6	244.9489743

----- Chemical=DDT Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9898667	0.0040482	3	0.7083436
bind	100.0000000	0	3	0
Logic50	-6.1100000	0.0345977	3	-0.9807685
HillSlope	-0.7899667	0.0389969	3	-8.5503011
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DDT Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9034667	0.0571562	3	10.9575090
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-5.3150000	0.0120968	3	-0.3942112
HillSlope	-0.8388000	0.2752989	3	-56.8468846
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	50.0000000	28.8675135	4	115.4700538
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=DDT Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	100.0000000	0	4	0
r2	0.9886750	0.0048793	4	0.9870325
bind	100.0000000	0	4	0
Logic50	-5.1325000	0.0661721	4	-2.5785533
HillSlope	-1.8012500	0.3010931	4	-33.4315739
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DES Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9899333	0.0023168	3	0.4053703
bind	100.0000000	0	3	0
Logic50	-8.2013333	0.0922936	3	-1.9491615
HillSlope	-1.0696667	0.1466712	3	-23.7496408
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	42.8571429	20.2030509	7	124.7219129
compete50	42.8571429	20.2030509	7	124.7219129
r2	0.8863667	0.0207192	6	5.7257906
bind	42.8571429	20.2030509	7	124.7219129
Logic50	-9.6286667	0.7806776	6	-19.8600901
HillSlope	-0.7779333	0.1565465	6	-49.2920033
okr2	42.8571429	20.2030509	7	124.7219129

----- Chemical=DES Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	57.1428571	20.2030509	7	93.5414347
BADFIT80	14.2857143	14.2857143	7	264.5751311
BADFIT70	14.2857143	14.2857143	7	264.5751311
BADFIT60	14.2857143	14.2857143	7	264.5751311

----- Chemical=DES Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9978000	0.000100000	3	0.0173587
bind	100.0000000	0	3	0
Logic50	-8.1533333	0.0483885	3	-1.0279390
HillSlope	-1.3440000	0.0778802	3	-10.0366481
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9987000	0.000416333	3	0.0722049
bind	100.0000000	0	3	0
Logic50	-8.1980000	0.0167432	3	-0.3537448
HillSlope	-1.0081333	0.0542233	3	-9.3159835
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9608200	0.0276161	5	6.4269576
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-7.9650000	0.1560908	4	-3.9194171
HillSlope	-0.8194500	0.1022683	4	-24.9602322
okr2	80.0000000	20.0000000	5	55.9016994
BADFIT90	20.0000000	20.0000000	5	223.6067977
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=DES Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9976750	0.000694472	4	0.1392181
bind	100.0000000	0	4	0
Logic50	-8.5282500	0.0504915	4	-1.1841009
HillSlope	-1.0196000	0.0728211	4	-14.2842520
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DHT Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9746333	0.0037315	3	0.6631447
bind	100.0000000	0	3	0
Logic50	-5.7793333	0.1270647	3	-3.8080960
HillSlope	-1.2827333	0.3356967	3	-45.3284963
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DHT Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9780667	0.0113427	3	2.0086774
bind	100.0000000	0	3	0
Logic50	-5.7783333	0.0194279	3	-0.5823506
HillSlope	-0.9406000	0.1404978	3	-25.8717179
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DHT Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9645250	0.0299945	4	6.2195459
bind	100.0000000	0	4	0
Logic50	-6.3282500	0.0539048	4	-1.7036247
HillSlope	-0.7569000	0.1620263	4	-42.8131242
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DHT Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9938667	0.0024395	3	0.4251396
bind	100.0000000	0	3	0
Logic50	-6.3866667	0.0316719	3	-0.8589362
HillSlope	-0.9149667	0.0237491	3	-4.4957591
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DHT Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9400750	0.0177944	4	3.7857502
bind	100.0000000	0	4	0
Logic50	-6.1177500	0.4016243	4	-13.1298036
HillSlope	-0.5665000	0.1181137	4	-41.6994361
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DHT Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9943500	0.0015025	4	0.3022071
bind	100.0000000	0	4	0
Logic50	-5.7785000	0.1190452	4	-4.1202789
HillSlope	-1.0038500	0.0574556	4	-11.4470515
okr2	100.0000000	0	4	0

----- Chemical=DHT Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Dex Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=E2 Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	14	0
compete50	100.0000000	0	14	0
r2	0.9749643	0.0027077	14	1.0391263
bind	100.0000000	0	14	0
Logic50	-8.7464286	0.0345625	14	-1.4785593
HillSlope	-1.1468286	0.0520111	14	-16.9692169
okr2	100.0000000	0	14	0
BADFIT90	0	0	14	.
BADFIT80	0	0	14	.
BADFIT70	0	0	14	.
BADFIT60	0	0	14	.

----- Chemical=E2 Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	85.0000000	8.1917802	20	43.0997116
compete50	85.0000000	8.1917802	20	43.0997116
r2	0.9800222	0.0041300	18	1.7879157
bind	85.0000000	8.1917802	20	43.0997116
Logic50	-8.8740000	0.0928649	18	-4.4398511
HillSlope	-0.8580389	0.0464514	18	-22.9682592
okr2	85.0000000	8.1917802	20	43.0997116
BADFIT90	10.0000000	6.8824720	20	307.7935056
BADFIT80	10.0000000	6.8824720	20	307.7935056
BADFIT70	10.0000000	6.8824720	20	307.7935056
BADFIT60	10.0000000	6.8824720	20	307.7935056

----- Chemical=E2 Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	13	0
compete50	100.0000000	0	13	0
r2	0.9957308	0.0018713	13	0.6775950
bind	100.0000000	0	13	0
Logic50	-8.9995385	0.0231255	13	-0.9264949
HillSlope	-0.9770231	0.0220662	13	-8.1431957
okr2	100.0000000	0	13	0
BADFIT90	0	0	13	.
BADFIT80	0	0	13	.
BADFIT70	0	0	13	.
BADFIT60	0	0	13	.

----- Chemical=E2 Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	18	0
compete50	100.0000000	0	18	0
r2	0.9818111	0.0120400	18	5.2027842
bind	100.0000000	0	18	0
Logic50	-8.7777222	0.0146800	18	-0.7095452
HillSlope	-1.1369278	0.0448884	18	-16.7508866
okr2	94.4444444	5.5555556	18	24.9567099

----- Chemical=E2 Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	5.5555556	5.5555556	18	424.2640687
BADFIT80	5.5555556	5.5555556	18	424.2640687
BADFIT70	0	0	18	.
BADFIT60	0	0	18	.

----- Chemical=E2 Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.0000000	5.5708601	30	33.9031752
compete50	90.0000000	5.5708601	30	33.9031752
r2	0.9101567	0.0228882	30	13.7738711
bind	86.6666667	6.3124277	30	39.8937581
Logic50	-8.4175000	0.0943180	28	-5.9291214
HillSlope	-2.6679310	1.7226536	29	-347.7141369
okr2	70.0000000	8.5096294	30	66.5845142
BADFIT90	30.0000000	8.5096294	30	155.3638666
BADFIT80	10.0000000	5.5708601	30	305.1285766
BADFIT70	3.3333333	3.3333333	30	547.7225575
BADFIT60	3.3333333	3.3333333	30	547.7225575

----- Chemical=E2 Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	22	0
compete50	100.0000000	0	22	0
r2	0.9903682	0.0016667	22	0.7893555
bind	100.0000000	0	22	0
Logic50	-9.0529545	0.0317664	22	-1.6458432
HillSlope	-0.9798227	0.0441832	22	-21.1505067
okr2	100.0000000	0	22	0
BADFIT90	0	0	22	.
BADFIT80	0	0	22	.
BADFIT70	0	0	22	.
BADFIT60	0	0	22	.

----- Chemical=E2-TC Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9839333	0.0085762	3	1.5096962
bind	100.0000000	0	3	0
Logic50	-8.1120000	0.6595031	3	-14.0815196
HillSlope	-1.1735000	0.1914491	3	-28.2573100
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2-TC Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9807667	0.0095144	3	1.6802653
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.9510000	0.2437095	3	-4.7158673
HillSlope	-0.9743000	0.2204876	3	-39.1969371
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2-TC Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9420500	0.000050000	2	0.0075060
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-9.0795000	0.0545000	2	-0.8488864
HillSlope	-1.4690000	0	2	0
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=E2-TC Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	50.0000000	28.8675135	4	115.4700538
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	50.0000000	28.8675135	4	115.4700538
BADFIT60	50.0000000	28.8675135	4	115.4700538

----- Chemical=E2-TC Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	85.7142857	14.2857143	7	44.0958552
compete50	100.0000000	0	7	0
r2	0.9316286	0.0526271	7	14.9456681
bind	85.7142857	14.2857143	7	44.0958552
Logic50	-6.3666667	0.4957981	6	-19.0751662
HillSlope	-1.1120667	0.0662803	6	-14.5992175
okr2	85.7142857	14.2857143	7	44.0958552
BADFIT90	14.2857143	14.2857143	7	264.5751311
BADFIT80	14.2857143	14.2857143	7	264.5751311
BADFIT70	14.2857143	14.2857143	7	264.5751311
BADFIT60	0	0	7	.

----- Chemical=E2-TC Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9714000	0.0080481	4	1.6570073
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-8.9722500	0.3895293	4	-8.6829788
HillSlope	-0.7507250	0.1073326	4	-28.5943858
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=E2-TC Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9977250	0.000706370	4	0.1415961
bind	100.0000000	0	4	0
Logic50	-9.0545000	0.0257860	4	-0.5695727
HillSlope	-1.2182500	0.0434250	4	-7.1290758
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=EE2 Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9693333	0.0060711	6	1.5341473
bind	100.0000000	0	6	0
Logic50	-8.5160000	0.0571104	6	-1.6426889
HillSlope	-1.2835000	0.1046772	6	-19.9770731
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=EE2 Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	42.8571429	20.2030509	7	124.7219129
compete50	42.8571429	20.2030509	7	124.7219129
r2	0.8394429	0.0677350	7	21.3486932
bind	42.8571429	20.2030509	7	124.7219129
Logic50	-10.8581667	0.5049376	6	-11.3908694
HillSlope	-0.5134167	0.1188021	6	-56.6799999
okr2	42.8571429	20.2030509	7	124.7219129

----- Chemical=EE2 Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	42.8571429	20.2030509	7	124.7219129
BADFIT80	42.8571429	20.2030509	7	124.7219129
BADFIT70	42.8571429	20.2030509	7	124.7219129
BADFIT60	0	0	7	.

----- Chemical=EE2 Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9915667	0.0047189	3	0.8242845
bind	100.0000000	0	3	0
Logic50	-8.7293333	0.0855499	3	-1.6974572
HillSlope	-1.1600000	0.0570468	3	-8.5179219
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=EE2 Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9986000	0.000288675	3	0.0500701
bind	100.0000000	0	3	0
Logic50	-8.6096667	0.0344206	3	-0.6924569
HillSlope	-1.0990000	0.0209523	3	-3.3021378
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=EE2 Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	77.7777778	14.6986184	9	56.6946710
compete50	88.8888889	11.1111111	9	37.5000000
r2	0.9410625	0.0170210	8	5.1157785
bind	88.8888889	11.1111111	9	37.5000000
Logic50	-7.8941250	0.3264953	8	-11.6981688
HillSlope	-0.9846500	0.1186120	8	-34.0715521
okr2	66.6666667	16.6666667	9	75.0000000
BADFIT90	33.3333333	16.6666667	9	150.0000000
BADFIT80	11.1111111	11.1111111	9	300.0000000
BADFIT70	11.1111111	11.1111111	9	300.0000000
BADFIT60	11.1111111	11.1111111	9	300.0000000

----- Chemical=EE2 Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9951750	0.000947255	4	0.1903695
bind	100.0000000	0	4	0
Logic50	-8.7880000	0.0947972	4	-2.1574227
HillSlope	-1.0060500	0.0932066	4	-18.5292170
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=EE2_2 Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9600000	0	3	0
bind	100.0000000	0	3	0
Logic50	-8.6056667	0.0176667	3	-0.3555746
HillSlope	-1.2120000	0	3	0
okr2	100.0000000	0	3	0

----- Chemical=EE2_2 Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ELactone Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	.	1	.
compete50	100.0000000	.	1	.
r2	0.9097000	.	1	.
bind	100.0000000	.	1	.
Logic50	-4.2730000	.	1	.
HillSlope	-0.8515000	.	1	.
okr2	100.0000000	.	1	.
BADFIT90	0	.	1	.
BADFIT80	0	.	1	.
BADFIT70	0	.	1	.
BADFIT60	0	.	1	.

----- Chemical=ELactone Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	100.0000000	0	3	0
r2	0.9582000	0.0149121	3	2.6955200
bind	100.0000000	0	3	0
Logic50	-4.5840000	0.2037376	3	-7.6981639
HillSlope	-0.9033667	0.2338941	3	-44.8451936
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ELactone Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9534500	0.0301500	2	4.4720267
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.5255000	0.3225000	2	-10.0780880
HillSlope	-1.0264500	0.1965500	2	-27.0800990
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	33.3333333	33.3333333	3	173.2050808

----- Chemical=ELactone Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	100.0000000	0	3	0
r2	0.9761333	0.0156013	3	2.7682975
bind	100.0000000	0	3	0
Logic50	-4.5060000	0.0840179	3	-3.2295427
HillSlope	-0.7762000	0.1138539	3	-25.4059114
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ELactone Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.8685000	.	1	.
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.8305000	0.7275000	2	-21.2988379
HillSlope	-1.5280000	1.2390000	2	-114.6734688
okr2	0	0	3	.

----- Chemical=ELactone Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	3	0
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=ELactone Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	100.0000000	0	4	0
r2	0.9702500	0.0106146	4	2.1880079
bind	100.0000000	0	4	0
Logic50	-3.8477500	0.0919650	4	-4.7801966
HillSlope	-0.8694750	0.0517571	4	-11.9053642
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Equol Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9754000	0.0158767	3	2.8192816
bind	100.0000000	0	3	0
Logic50	-6.7573333	0.0638757	3	-1.6372737
HillSlope	-0.9929333	0.0583530	3	-10.1789652
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.3333333	16.6666667	6	48.9897949
compete50	83.3333333	16.6666667	6	48.9897949
r2	0.9626500	0.0163908	6	4.1706809
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-6.2856667	0.2946594	6	-11.4827159
HillSlope	-1.0163000	0.1065907	6	-25.6905301
okr2	66.6666667	21.0818511	6	77.4596669
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=Equol Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9931000	0.0044911	3	0.7832864
bind	100.0000000	0	3	0
Logic50	-6.9373333	0.1127613	3	-2.8153225
HillSlope	-0.9684000	0.0303291	3	-5.4245678
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9989333	0.000120185	3	0.0208389
bind	100.0000000	0	3	0
Logic50	-7.1170000	0.0345012	3	-0.8396494
HillSlope	-1.0042000	0.0383011	3	-6.6061970
okr2	100.0000000	0	3	0

----- Chemical=Equol Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	20.0000000	5	55.9016994
compete50	80.0000000	20.0000000	5	55.9016994
r2	0.9333750	0.0388118	4	8.3164471
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-7.0025000	0.3716572	4	-10.6149864
HillSlope	-0.8396500	0.0373012	4	-8.8849337
okr2	60.0000000	24.4948974	5	91.2870929
BADFIT90	40.0000000	24.4948974	5	136.9306394
BADFIT80	20.0000000	20.0000000	5	223.6067977
BADFIT70	20.0000000	20.0000000	5	223.6067977
BADFIT60	20.0000000	20.0000000	5	223.6067977

----- Chemical=Equol Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9937750	0.000923196	4	0.1857959
bind	100.0000000	0	4	0
Logic50	-6.2280000	0.0561649	4	-1.8036267
HillSlope	-1.1567500	0.0518787	4	-8.9697280
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Gen Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9874667	0.0016171	6	0.4011421
bind	100.0000000	0	6	0
Logic50	-7.1271667	0.0336634	6	-1.1569573
HillSlope	-1.5204000	0.1693076	6	-27.2768517
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=Gen Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	71.4285714	18.4427778	7	68.3130051
compete50	71.4285714	18.4427778	7	68.3130051
r2	0.9714143	0.0107884	7	2.9383267
bind	71.4285714	18.4427778	7	68.3130051
Logic50	-6.8792857	0.1931417	7	-7.4281665
HillSlope	-1.2271857	0.2953640	7	-63.6789975
okr2	71.4285714	18.4427778	7	68.3130051
BADFIT90	0	0	7	.
BADFIT80	0	0	7	.
BADFIT70	0	0	7	.
BADFIT60	0	0	7	.

----- Chemical=Gen Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9602500	0.0250504	6	6.3900717
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-6.1668000	0.0621590	5	-2.2538712
HillSlope	-1.4342000	0.1626922	5	-25.3654118
okr2	83.3333333	16.6666667	6	48.9897949

----- Chemical=Gen Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=Gen Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9974000	0.000873689	3	0.1517219
bind	100.0000000	0	3	0
Logic50	-6.8490000	0.0204287	3	-0.5166245
HillSlope	-0.8468000	0.0321332	3	-6.5725503
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Gen Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	13.3333333	10	52.7046277
compete50	80.0000000	13.3333333	10	52.7046277
r2	0.9597625	0.0133952	8	3.9475755
bind	80.0000000	13.3333333	10	52.7046277
Logic50	-6.6215000	0.1267234	8	-5.4130925
HillSlope	-0.7464375	0.0767378	8	-29.0777728
okr2	70.0000000	15.2752523	10	69.0065559
BADFIT90	30.0000000	15.2752523	10	161.0152972
BADFIT80	20.0000000	13.3333333	10	210.8185107
BADFIT70	20.0000000	13.3333333	10	210.8185107
BADFIT60	20.0000000	13.3333333	10	210.8185107

----- Chemical=GenB Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9923750	0.0021581	4	0.4349315
bind	100.0000000	0	4	0
Logic50	-7.1850000	0.0745464	4	-2.0750565
HillSlope	-0.9311000	0.0798155	4	-17.1443377
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=GenW Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9919500	0.0010571	4	0.2131395
bind	100.0000000	0	4	0
Logic50	-6.7372500	0.0270073	4	-0.8017315
HillSlope	-1.1122500	0.0192673	4	-3.4645643
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=HPTE Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9800333	0.0105256	3	1.8602260
bind	100.0000000	0	3	0
Logic50	-7.0833333	0.0153007	3	-0.3741398
HillSlope	-1.0740333	0.1519296	3	-24.5010807
okr2	100.0000000	0	3	0

----- Chemical=HPTE Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Heptylph Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9127333	0.0450112	3	8.5415615
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-4.5380000	.	1	.
HillSlope	-0.6666000	.	1	.
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Heptylph Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9619000	0.0092197	3	1.6601552
bind	100.0000000	0	3	0
Logic50	-3.6620000	0.1334516	3	-6.3119873
HillSlope	-0.4612000	0.1612769	3	-60.5680539
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Heptylph Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9195000	0.0425266	4	9.2499316
bind	100.0000000	0	4	0
Logic50	-3.4065000	0.0549886	4	-3.2284536
HillSlope	-0.7399750	0.1253028	4	-33.8667682
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Heptylph Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9054250	0.0822589	4	18.1702393
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-3.3696667	0.0272356	3	-1.3999438
HillSlope	-0.6230667	0.0059145	3	-1.6441556
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	0	0	4	.

----- Chemical=Heptylph Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9143500	0.0023500	2	0.3634715
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-5.9545000	0.3635000	2	-8.6332459
HillSlope	-1.1677500	0.8102500	2	-98.1260149
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Heptylph Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	33.3333333	33.3333333	3	173.2050808

----- Chemical=Heptylph Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Hexestro Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9909667	0.0020691	3	0.3616428
bind	100.0000000	0	3	0
Logic50	-7.5040000	0.0598025	3	-1.3803423
HillSlope	-1.3126667	0.0782397	3	-10.3236465
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Hexestro Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	62.5000000	18.2981264	8	82.8078671
compete50	62.5000000	18.2981264	8	82.8078671
r2	0.9162500	0.0336071	8	10.3743757
bind	62.5000000	18.2981264	8	82.8078671
Logic50	-8.0948750	0.0751927	8	-2.6273057
HillSlope	-1.1720750	0.2093863	8	-50.5286687
okr2	50.0000000	18.8982237	8	106.9044968
BADFIT90	37.5000000	18.2981264	8	138.0131119
BADFIT80	12.5000000	12.5000000	8	282.8427125
BADFIT70	0	0	8	.
BADFIT60	0	0	8	.

----- Chemical=Hexestro Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9779000	0.0185476	3	3.2851395
bind	100.0000000	0	3	0
Logic50	-7.5670000	0.1135444	3	-2.5989783
HillSlope	-1.1550667	0.0855188	3	-12.8237591
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Hexestro Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9941667	0.0037777	3	0.6581582
bind	100.0000000	0	3	0
Logic50	-7.4520000	0.0309246	3	-0.7187741
HillSlope	-0.9909333	0.0207285	3	-3.6231329
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Hexestro Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	13.3333333	10	52.7046277
compete50	90.0000000	10.0000000	10	35.1364184
r2	0.9691667	0.0116073	9	3.5929701
bind	80.0000000	13.3333333	10	52.7046277
Logic50	-6.8607500	0.0961912	8	-3.9655972
HillSlope	-0.8201444	0.0704985	9	-25.7876086
okr2	80.0000000	13.3333333	10	52.7046277
BADFIT90	20.0000000	13.3333333	10	210.8185107
BADFIT80	10.0000000	10.0000000	10	316.2277660
BADFIT70	10.0000000	10.0000000	10	316.2277660
BADFIT60	10.0000000	10.0000000	10	316.2277660

----- Chemical=Hexestro Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9981250	0.000249583	4	0.0500104
bind	100.0000000	0	4	0
Logic50	-7.5967500	0.0277079	4	-0.7294679
HillSlope	-1.1772500	0.0109116	4	-1.8537399
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Kepone Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.8465333	0.1182282	3	24.1900934
bind	100.0000000	0	3	0
Logic50	-5.1653333	0.1239494	3	-4.1562970
HillSlope	-1.9260000	0.7732328	3	-69.5367880
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9754333	0.0030661	3	0.5444433
bind	100.0000000	0	3	0
Logic50	-5.8926667	0.1019515	3	-2.9966942
HillSlope	-1.7130000	0.2635014	3	-26.6431905
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9763000	0.0079000	3	1.4015366
bind	100.0000000	0	3	0
Logic50	-5.3120000	0.0626844	3	-2.0439111
HillSlope	-0.9930333	0.000088192	3	-0.0153824
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9866667	0.0042729	3	0.7500913
bind	100.0000000	0	3	0
Logic50	-5.6760000	0.0445459	3	-1.3593320
HillSlope	-1.3013333	0.0908448	3	-12.0912764
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.8320000	0.0465717	3	9.6952512
bind	100.0000000	0	3	0
Logic50	-6.4586667	0.8957720	3	-24.0223357
HillSlope	-0.4047667	0.1147029	3	-49.0829251
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	66.6666667	33.3333333	3	86.6025404
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9892250	0.0043592	4	0.8813287
bind	100.0000000	0	4	0
Logic50	-5.0780000	0.0632363	4	-2.4905998
HillSlope	-1.0488500	0.0327387	4	-6.2427803
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NE Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	13	0
compete50	100.0000000	0	13	0
r2	0.9497462	0.0179792	13	6.8254826
bind	84.6153846	10.4154339	13	44.3812682
Logic50	-6.1983636	0.0338844	11	-1.8130872
HillSlope	-1.0858091	0.0823396	11	-25.1507989
okr2	84.6153846	10.4154339	13	44.3812682
BADFIT90	15.3846154	10.4154339	13	244.0969753
BADFIT80	0	0	13	.
BADFIT70	0	0	13	.
BADFIT60	0	0	13	.

----- Chemical=NE Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	94.4444444	5.5555556	18	24.9567099
compete50	94.4444444	5.5555556	18	24.9567099
r2	0.9763389	0.0035283	18	1.5332001
bind	94.4444444	5.5555556	18	24.9567099
Logic50	-6.1343889	0.0837679	18	-5.7935176
HillSlope	-0.9658389	0.0524690	18	-23.0480415
okr2	94.4444444	5.5555556	18	24.9567099

----- Chemical=NE Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	18	.
BADFIT80	0	0	18	.
BADFIT70	0	0	18	.
BADFIT60	0	0	18	.

----- Chemical=NE Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	13	0
compete50	100.0000000	0	13	0
r2	0.9884846	0.0033385	13	1.2177521
bind	100.0000000	0	13	0
Logic50	-6.3173846	0.0342527	13	-1.9549233
HillSlope	-1.1891692	0.2010823	13	-60.9679895
okr2	100.0000000	0	13	0
BADFIT90	0	0	13	.
BADFIT80	0	0	13	.
BADFIT70	0	0	13	.
BADFIT60	0	0	13	.

----- Chemical=NE Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	18	0
compete50	100.0000000	0	18	0
r2	0.9939444	0.0012602	18	0.5378954
bind	100.0000000	0	18	0
Logic50	-6.6998889	0.0240745	18	-1.5244940
HillSlope	-0.8718722	0.0164059	18	-7.9833240
okr2	100.0000000	0	18	0
BADFIT90	0	0	18	.
BADFIT80	0	0	18	.
BADFIT70	0	0	18	.
BADFIT60	0	0	18	.

----- Chemical=NE Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	86.6666667	6.3124277	30	39.8937581
compete50	90.0000000	5.5708601	30	33.9031752
r2	0.9324069	0.0145053	29	8.3776269
bind	86.6666667	6.3124277	30	39.8937581
Logic50	-6.0942857	0.0830227	28	-7.2086330
HillSlope	-0.9066714	0.0754907	28	-44.0577703
okr2	76.6666667	7.8540323	30	56.1108348
BADFIT90	23.3333333	7.8540323	30	184.3641716
BADFIT80	13.3333333	6.3124277	30	259.3094277
BADFIT70	6.6666667	4.6320556	30	380.5621976
BADFIT60	3.3333333	3.3333333	30	547.7225575

----- Chemical=NE Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	22	0
compete50	100.0000000	0	22	0
r2	0.9907545	0.0012773	22	0.6046749
bind	100.0000000	0	22	0
Logic50	-6.3794545	0.0382446	22	-2.8118903
HillSlope	-0.8913182	0.0299466	22	-15.7589148
okr2	100.0000000	0	22	0
BADFIT90	0	0	22	.
BADFIT80	0	0	22	.
BADFIT70	0	0	22	.
BADFIT60	0	0	22	.

----- Chemical=NE-TC Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	2	0
compete50	100.0000000	0	2	0
r2	0.9620500	0.0234500	2	3.4471502
bind	100.0000000	0	2	0
Logic50	-6.3230000	0.0220000	2	-0.4920560
HillSlope	-0.7806500	0.0159500	2	-2.8894775
okr2	100.0000000	0	2	0

14:43 Thursday, July 11, 2013

----- Chemical=NE-TC Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	2	.
BADFIT80	0	0	2	.
BADFIT70	0	0	2	.
BADFIT60	0	0	2	.

----- Chemical=NE-TC Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9708667	0.0137458	3	2.4522906
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-6.3570000	0.0030000	2	-0.0667397
HillSlope	-0.8174000	0.0490000	2	-8.4776688
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE-TC Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9543750	0.0342504	4	7.1775480
bind	100.0000000	0	4	0
Logic50	-6.6175000	0.2655766	4	-8.0264926
HillSlope	-0.7605750	0.2096682	4	-55.1341182
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NE-TC Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9938333	0.0013017	3	0.2268615
bind	100.0000000	0	3	0
Logic50	-6.7920000	0.0711501	3	-1.8144221
HillSlope	-0.9104000	0.0482930	3	-9.1878142
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE-TC Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.8643500	0.1027147	4	23.7669301
bind	100.0000000	0	4	0
Logic50	-5.8570000	0.2069481	4	-7.0666915
HillSlope	-0.6067150	0.1838085	4	-60.5913763
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=NE-TC Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9922750	0.0030880	4	0.6224042
bind	100.0000000	0	4	0
Logic50	-6.3530000	0.0849166	4	-2.6732764
HillSlope	-0.9021000	0.0494450	4	-10.9621925
okr2	100.0000000	0	4	0

----- Chemical=NE-TC Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NPhenol Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9733000	0.0031765	3	0.5652746
bind	100.0000000	0	3	0
Logic50	-5.7906667	0.1059502	3	-3.1690846
HillSlope	-1.2124667	0.4049297	3	-57.8456154
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	22.3606798	6	109.5445115
compete50	50.0000000	22.3606798	6	109.5445115
r2	0.9264000	0.0458373	6	12.1198219
bind	50.0000000	22.3606798	6	109.5445115
Logic50	-5.9776667	0.1015463	6	-4.1610975
HillSlope	-0.7629833	0.1017821	6	-32.6762239
okr2	50.0000000	22.3606798	6	109.5445115
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	16.6666667	16.6666667	6	244.9489743
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	0	0	6	.

----- Chemical=NPhenol Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9898000	0.0041065	3	0.7185962
bind	100.0000000	0	3	0
Logic50	-5.6130000	0.4671427	3	-14.4150178
HillSlope	-0.8113000	0.1103011	3	-23.5482797
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9966333	0.000448454	3	0.0779369
bind	100.0000000	0	3	0
Logic50	-6.1463333	0.0197005	3	-0.5551656
HillSlope	-0.8015000	0.0280885	3	-6.0699555
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9362667	0.0192137	3	3.5544545
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-5.1596667	0.4293803	3	-14.4138866
HillSlope	-0.4412000	0.1650677	3	-64.8018203
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=NPhenol Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=NPhenol Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9897750	0.000612883	4	0.1238428
bind	100.0000000	0	4	0
Logic50	-5.4487500	0.0735803	4	-2.7008144
HillSlope	-0.6828500	0.0573711	4	-16.8034125
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Nethdron Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9744000	0.0053013	3	0.9423284
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-6.2610000	0.1220000	3	-3.3750231
HillSlope	-0.9959000	0.0579219	3	-10.0736647
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=OTES Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.
BADFIT90	100.0000000	0	2	0
BADFIT80	100.0000000	0	2	0
BADFIT70	100.0000000	0	2	0
BADFIT60	100.0000000	0	2	0

----- Chemical=OTES Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=OTES Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=OTES Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=OTES Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=OTES Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.8377000	.	1	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-10.8900000	.	1	.
HillSlope	0.1640000	.	1	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	75.0000000	25.0000000	4	66.6666667
BADFIT70	75.0000000	25.0000000	4	66.6666667
BADFIT60	75.0000000	25.0000000	4	66.6666667

----- Chemical=OTES Lab=Missouri -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Progeste Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Progeste Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Progesterone Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Progesterone Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.4380000	.	1	.
HillSlope	3.8610000	.	1	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Progesterone Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=Progesterone Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.9172000	0.0504000	2	7.7710819
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-6.0510000	0.4030000	2	-9.4187418
HillSlope	-0.6380000	0.1315000	2	-29.1487592
okr2	25.0000000	25.0000000	4	200.0000000
BADFIT90	75.0000000	25.0000000	4	66.6666667
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	50.0000000	28.8675135	4	115.4700538
BADFIT60	50.0000000	28.8675135	4	115.4700538

----- Chemical=Progesterone Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=SDS Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9640000	0.000500000	2	0.0733513
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	50.0000000	28.8675135	4	115.4700538

----- Chemical=SDS Lab=Ceetox -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	50.0000000	28.8675135	4	115.4700538
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	50.0000000	28.8675135	4	115.4700538
BADFIT60	50.0000000	28.8675135	4	115.4700538

----- Chemical=Tamox Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9819333	0.0032835	3	0.5791758
bind	100.0000000	0	3	0
Logic50	-7.4833333	0.3612747	3	-8.3618649
HillSlope	-1.0290000	0.0985106	3	-16.5816638
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Tamox Lab=Dietrich -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9861667	0.000753510	3	0.1323426
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-7.5576667	0.0806749	3	-1.8488918
HillSlope	-1.3776333	0.2425314	3	-30.4926321
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Tamox Lab=Freyberg -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9919667	0.0024333	3	0.4248789
bind	100.0000000	0	3	0
Logic50	-7.9670000	0.0587736	3	-1.2777560
HillSlope	-1.2283333	0.0636667	3	-8.9775225
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Tamox Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9935500	0.0022824	4	0.4594353
bind	100.0000000	0	4	0
Logic50	-6.7752500	0.5318064	4	-15.6985031
HillSlope	-1.0292750	0.0375022	4	-7.2871028
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Tamox Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9719600	0.0164627	5	3.7873702
bind	100.0000000	0	5	0
Logic50	-7.3392000	0.1843745	5	-5.6174217
HillSlope	-0.7728000	0.0517416	5	-14.9712245
okr2	100.0000000	0	5	0

----- Chemical=Tamox Lab=Lovelace -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	5	.
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=Tamox Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9945000	0.0016975	4	0.3413871
bind	100.0000000	0	4	0
Logic50	-8.3590000	0.1089472	4	-2.6067050
HillSlope	-1.3082500	0.1070890	4	-16.3713419
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Zear Lab=Ceetox -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9897000	.	1	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-7.9260000	.	1	.
HillSlope	-1.1700000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	66.6666667	33.3333333	3	86.6025404
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=Zear Lab=Dietrich -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.8620333	0.1227738	3	24.6684826
bind	100.0000000	0	3	0
Logic50	-8.7210000	0.0670025	3	-1.3307157
HillSlope	-0.5536333	0.0782468	3	-24.4796230
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	0	0	3	.

----- Chemical=Zear Lab=Freyberg -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.8926000	0.0452041	4	10.1286462
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-7.6603333	0.0650880	3	-1.4716811
HillSlope	-1.4730000	0.1928963	3	-22.6820279
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Zear Lab=JapanCER -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9349000	0.0607059	5	14.5194668
bind	100.0000000	0	5	0
Logic50	-6.2976000	0.4104180	5	-14.5725771
HillSlope	-1.1038400	0.0628188	5	-12.7253205
okr2	80.0000000	20.0000000	5	55.9016994

----- Chemical=Zear Lab=JapanCER -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	20.0000000	20.0000000	5	223.6067977
BADFIT80	20.0000000	20.0000000	5	223.6067977
BADFIT70	20.0000000	20.0000000	5	223.6067977
BADFIT60	0	0	5	.

----- Chemical=Zear Lab=Lovelace -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9562750	0.0285363	4	5.9682151
bind	100.0000000	0	4	0
Logic50	-7.4335000	0.2134215	4	-5.7421546
HillSlope	-0.8229000	0.2003813	4	-48.7012636
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Zear Lab=Missouri -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9954500	0.0012652	4	0.2542047
bind	100.0000000	0	4	0
Logic50	-7.8375000	0.0968827	4	-2.4722848
HillSlope	-1.0195000	0.0400115	4	-7.8492313
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Atr Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Atr Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Atr Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Atr Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Atr Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=Atr Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.
BADFIT90	100.0000000	0	2	0
BADFIT80	100.0000000	0	2	0
BADFIT70	100.0000000	0	2	0
BADFIT60	100.0000000	0	2	0

----- Chemical=Atr Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Atr-2 Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.
BADFIT90	100.0000000	0	2	0
BADFIT80	100.0000000	0	2	0
BADFIT70	100.0000000	0	2	0
BADFIT60	100.0000000	0	2	0

----- Chemical=BPA Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	2	0
compete50	100.0000000	0	2	0
r2	0.9866500	0.0028500	2	0.4085044
bind	100.0000000	0	2	0
Logic50	-5.9090000	0.1270000	2	-3.0395181
HillSlope	-1.2930000	0.2840000	2	-31.0623861
okr2	100.0000000	0	2	0

----- Chemical=BPA Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	2	.
BADFIT80	0	0	2	.
BADFIT70	0	0	2	.
BADFIT60	0	0	2	.

----- Chemical=BPA Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9679333	0.0154773	3	2.7695630
bind	100.0000000	0	3	0
Logic50	-5.7910000	0.3687768	3	-11.0298768
HillSlope	-0.3529667	0.0798588	3	-39.1877145
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=BPA Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9831667	0.0063667	3	1.1216196
bind	100.0000000	0	3	0
Logic50	-6.1423333	0.0886309	3	-2.4992668
HillSlope	-0.9343000	0.0289500	3	-5.3668946
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=BPA Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9055000	0.0737745	4	16.2947515
bind	100.0000000	0	4	0
Logic50	-6.2025000	0.0474069	4	-1.5286393
HillSlope	-1.2357500	0.2714659	4	-43.9354059
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	0	0	4	.

----- Chemical=BPA Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	2	0
compete50	100.0000000	0	2	0
r2	0.9847000	0.0078000	2	1.1202260
bind	100.0000000	0	2	0
Logic50	-6.1070000	0.3200000	2	-7.4103216
HillSlope	-0.8619500	0.3690500	2	-60.5505557
okr2	100.0000000	0	2	0
BADFIT90	0	0	2	.
BADFIT80	0	0	2	.
BADFIT70	0	0	2	.
BADFIT60	0	0	2	.

----- Chemical=BPA Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9890500	0.0025863	4	0.5229953
bind	100.0000000	0	4	0
Logic50	-5.7535000	0.1438729	4	-5.0012312
HillSlope	-0.8934750	0.1095434	4	-24.5207575
okr2	100.0000000	0	4	0

----- Chemical=BPA Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=BaA_DMSO Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.8915000	.	1	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=BaA_DMSO Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-8.7500000	.	1	.
HillSlope	3.1990000	.	1	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=BaA_DMSO Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=BaA_DMSO Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=BaA_Etho Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=BaA_Etho Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=BaA_Etho Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=BaA_Etho Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	.	1	.
compete50	0	.	1	.
r2	.	.	0	.
bind	0	.	1	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	.	1	.
BADFIT90	100.0000000	.	1	.
BADFIT80	100.0000000	.	1	.
BADFIT70	100.0000000	.	1	.
BADFIT60	100.0000000	.	1	.

----- Chemical=BaA_Etho Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=ButylPar Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9551333	0.0099009	3	1.7954413
bind	100.0000000	0	3	0
Logic50	-4.5203333	0.0530859	3	-2.0340856
HillSlope	-0.4745333	0.0363234	3	-13.2580814
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9426000	.	1	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-4.0810000	.	1	.
HillSlope	-0.7796000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=ButylPar Lab=Dietrich Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	66.6666667	33.3333333	3	86.6025404
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=ButylPar Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9230333	0.0033790	3	0.6340654
bind	100.0000000	0	3	0
Logic50	-4.2640000	0.1128111	3	-4.5824220
HillSlope	-0.1798300	0.0564623	3	-54.3822565
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9801333	0.0044487	3	0.7861593
bind	100.0000000	0	3	0
Logic50	-4.6683333	0.0447747	3	-1.6612381
HillSlope	-0.6187000	0.0616119	3	-17.2482616
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9629667	0.0095599	3	1.7194967
bind	100.0000000	0	3	0
Logic50	-4.7693333	0.0314660	3	-1.1427334
HillSlope	-0.4766333	0.0192235	3	-6.9856624
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ButylPar Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	21.0818511	6	154.9193338
compete50	83.3333333	16.6666667	6	48.9897949
r2	0.9270600	0.0219282	5	5.2890726
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-5.1726000	0.4544338	5	-19.6447594
HillSlope	-0.8072200	0.1700974	5	-47.1184289
okr2	50.0000000	22.3606798	6	109.5445115
BADFIT90	50.0000000	22.3606798	6	109.5445115
BADFIT80	16.6666667	16.6666667	6	244.9489743
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	16.6666667	16.6666667	6	244.9489743

----- Chemical=ButylPar Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9889000	0.0016099	4	0.3255871
bind	100.0000000	0	4	0
Logic50	-4.1865000	0.0541979	4	-2.5891766
HillSlope	-0.9039000	0.0615991	4	-13.6296377
okr2	100.0000000	0	4	0

----- Chemical=ButylPar Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Cort Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	21.0818511	6	154.9193338
compete50	33.3333333	21.0818511	6	154.9193338
r2	0.3379000	0	2	0
bind	16.6666667	16.6666667	6	244.9489743
Logic50	-10.3700000	.	1	.
HillSlope	1.3341333	1.2194333	3	158.3140483
okr2	0	0	6	.
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=Cort Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Cort Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Cort Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	.	.	0	.
bind	0	0	6	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	6	.
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=Cort Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.

----- Chemical=Cort Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Cort Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	10	.
compete50	20.0000000	13.3333333	10	210.8185107
r2	0.8939500	0.0263500	2	4.1685248
bind	20.0000000	13.3333333	10	210.8185107
Logic50	-4.2455000	0.0525000	2	-1.7488214
HillSlope	-1.4220000	0.0900000	2	-8.9507187
okr2	10.0000000	10.0000000	10	316.2277660
BADFIT90	90.0000000	10.0000000	10	35.1364184
BADFIT80	80.0000000	13.3333333	10	52.7046277
BADFIT70	80.0000000	13.3333333	10	52.7046277
BADFIT60	80.0000000	13.3333333	10	52.7046277

----- Chemical=Cort Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DBP Lab=Ceetox Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=DBP Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	.	.	0	.
bind	0	0	6	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	6	.

----- Chemical=DBP Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=DBP Lab=Dietrich Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DBP Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	9	.
compete50	0	0	9	.
r2	.	.	0	.
bind	0	0	9	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	9	.
BADFIT90	100.0000000	0	9	0
BADFIT80	100.0000000	0	9	0
BADFIT70	100.0000000	0	9	0
BADFIT60	100.0000000	0	9	0

----- Chemical=DBP Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	.	.	0	.
bind	0	0	6	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	6	.
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=DBP Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	7	.
compete50	0	0	7	.
r2	-2.6810000	.	1	.
bind	14.2857143	14.2857143	7	264.5751311
Logic50	-6.9880000	.	1	.
HillSlope	3.3310000	.	1	.
okr2	0	0	7	.

----- Chemical=DBP Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	7	0
BADFIT80	100.0000000	0	7	0
BADFIT70	100.0000000	0	7	0
BADFIT60	100.0000000	0	7	0

----- Chemical=DBP Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	12	.
compete50	0	0	12	.
r2	.	.	0	.
bind	0	0	12	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	12	.
BADFIT90	100.0000000	0	12	0
BADFIT80	100.0000000	0	12	0
BADFIT70	100.0000000	0	12	0
BADFIT60	100.0000000	0	12	0

----- Chemical=DBP Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	15	.
compete50	6.6666667	6.6666667	15	387.2983346
r2	0.7647000	.	1	.
bind	0	0	15	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	15	.

----- Chemical=DBP Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	15	0
BADFIT80	100.0000000	0	15	0
BADFIT70	93.3333333	6.6666667	15	27.6641668
BADFIT60	93.3333333	6.6666667	15	27.6641668

----- Chemical=DBP Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	9	.
compete50	0	0	9	.
r2	.	.	0	.
bind	0	0	9	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	9	.
BADFIT90	100.0000000	0	9	0
BADFIT80	100.0000000	0	9	0
BADFIT70	100.0000000	0	9	0
BADFIT60	100.0000000	0	9	0

----- Chemical=DBP Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	6	.
compete50	0	0	6	.
r2	.	.	0	.
bind	0	0	6	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	6	.
BADFIT90	100.0000000	0	6	0
BADFIT80	100.0000000	0	6	0
BADFIT70	100.0000000	0	6	0
BADFIT60	100.0000000	0	6	0

----- Chemical=DBP Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DBP Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	12	.
compete50	0	0	12	.
r2	.	.	0	.
bind	0	0	12	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	12	.
BADFIT90	100.0000000	0	12	0
BADFIT80	100.0000000	0	12	0
BADFIT70	100.0000000	0	12	0
BADFIT60	100.0000000	0	12	0

----- Chemical=DBP-TC Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=DBP-TC Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DBP-TC Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=DBP-TC Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=DBP-TC Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=DDT Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.9807000	0.000655744	3	0.1158134
bind	100.0000000	0	3	0
Logic50	-6.0626667	0.4069653	3	-11.6266432
HillSlope	-1.4495333	0.4299241	3	-51.3717351
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DDT Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.7493500	0.0272500	2	5.1427663
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-5.2700000	0.1030000	2	-2.7640227
HillSlope	-0.1719500	0.0229500	2	-18.8753715
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	33.3333333	33.3333333	3	173.2050808

----- Chemical=DDT Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	100.0000000	0	3	0
r2	0.9286000	0.0189850	3	3.5411344
bind	100.0000000	0	3	0
Logic50	-5.2350000	0.0274651	3	-0.9087106
HillSlope	-0.8543333	0.0771908	3	-15.6494426
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DDT Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.3333333	16.6666667	6	48.9897949
compete50	100.0000000	0	6	0
r2	0.9025667	0.0873598	6	23.7087213
bind	100.0000000	0	6	0
Logic50	-5.9230000	0.0553239	6	-2.2879506
HillSlope	-0.8365417	0.1823752	6	-53.4015315
okr2	83.3333333	16.6666667	6	48.9897949
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	16.6666667	16.6666667	6	244.9489743
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	16.6666667	16.6666667	6	244.9489743

----- Chemical=DDT Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9898667	0.0040482	3	0.7083436
bind	100.0000000	0	3	0
Logic50	-6.1100000	0.0345977	3	-0.9807685
HillSlope	-0.7899667	0.0389969	3	-8.5503011
okr2	100.0000000	0	3	0

----- Chemical=DDT Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DDT Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9034667	0.0571562	3	10.9575090
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-5.3150000	0.0120968	3	-0.3942112
HillSlope	-0.8388000	0.2752989	3	-56.8468846
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	50.0000000	28.8675135	4	115.4700538
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=DDT Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	100.0000000	0	4	0
r2	0.9886750	0.0048793	4	0.9870325
bind	100.0000000	0	4	0
Logic50	-5.1325000	0.0661721	4	-2.5785533
HillSlope	-1.8012500	0.3010931	4	-33.4315739
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DES Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9899333	0.0023168	3	0.4053703
bind	100.0000000	0	3	0
Logic50	-8.2013333	0.0922936	3	-1.9491615
HillSlope	-1.0696667	0.1466712	3	-23.7496408
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	0.8489667	0.0268055	3	5.4688220
bind	0	0	3	.
Logic50	-10.9073333	1.1878386	3	-18.8625090
HillSlope	-0.6540000	0.3186810	3	-84.3993359
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9237667	0.0053976	3	1.0120494
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-8.3500000	0.0365923	3	-0.7590396
HillSlope	-0.9018667	0.0749461	3	-14.3935260
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=DES Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=DES Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9978000	0.000100000	3	0.0173587
bind	100.0000000	0	3	0
Logic50	-8.1533333	0.0483885	3	-1.0279390
HillSlope	-1.3440000	0.0778802	3	-10.0366481
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9987000	0.000416333	3	0.0722049
bind	100.0000000	0	3	0
Logic50	-8.1980000	0.0167432	3	-0.3537448
HillSlope	-1.0081333	0.0542233	3	-9.3159835
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DES Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9608200	0.0276161	5	6.4269576
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-7.9650000	0.1560908	4	-3.9194171
HillSlope	-0.8194500	0.1022683	4	-24.9602322
okr2	80.0000000	20.0000000	5	55.9016994
BADFIT90	20.0000000	20.0000000	5	223.6067977
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=DES Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9976750	0.000694472	4	0.1392181
bind	100.0000000	0	4	0
Logic50	-8.5282500	0.0504915	4	-1.1841009
HillSlope	-1.0196000	0.0728211	4	-14.2842520
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DHT Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9746333	0.0037315	3	0.6631447
bind	100.0000000	0	3	0
Logic50	-5.7793333	0.1270647	3	-3.8080960
HillSlope	-1.2827333	0.3356967	3	-45.3284963
okr2	100.0000000	0	3	0

----- Chemical=DHT Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DHT Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9780667	0.0113427	3	2.0086774
bind	100.0000000	0	3	0
Logic50	-5.7783333	0.0194279	3	-0.5823506
HillSlope	-0.9406000	0.1404978	3	-25.8717179
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DHT Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9645250	0.0299945	4	6.2195459
bind	100.0000000	0	4	0
Logic50	-6.3282500	0.0539048	4	-1.7036247
HillSlope	-0.7569000	0.1620263	4	-42.8131242
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DHT Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9938667	0.0024395	3	0.4251396
bind	100.0000000	0	3	0
Logic50	-6.3866667	0.0316719	3	-0.8589362
HillSlope	-0.9149667	0.0237491	3	-4.4957591
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=DHT Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9400750	0.0177944	4	3.7857502
bind	100.0000000	0	4	0
Logic50	-6.1177500	0.4016243	4	-13.1298036
HillSlope	-0.5665000	0.1181137	4	-41.6994361
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=DHT Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9943500	0.0015025	4	0.3022071
bind	100.0000000	0	4	0
Logic50	-5.7785000	0.1190452	4	-4.1202789
HillSlope	-1.0038500	0.0574556	4	-11.4470515
okr2	100.0000000	0	4	0

----- Chemical=DHT Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Dex Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=E2 Lab=Ceetox Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9664667	0.0042514	3	0.7619145
bind	100.0000000	0	3	0
Logic50	-8.8170000	0.0565184	3	-1.1102733
HillSlope	-1.1925667	0.1826672	3	-26.5300711
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2 Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9809400	0.0048614	5	1.1081728
bind	100.0000000	0	5	0
Logic50	-8.6212000	0.0503561	5	-1.3060796
HillSlope	-1.1636000	0.0653855	5	-12.5650018
okr2	100.0000000	0	5	0
BADFIT90	0	0	5	.
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=E2 Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9742333	0.0034391	6	0.8646732
bind	100.0000000	0	6	0
Logic50	-8.8155000	0.0291853	6	-0.8109484
HillSlope	-1.1099833	0.0797500	6	-17.5990818
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=E2 Lab=Dietrich Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9605000	0.0125694	3	2.2666166
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-9.3200000	0.5413024	3	-10.0596924
HillSlope	-0.8770667	0.2009692	3	-39.6878384
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=E2 Lab=Dietrich Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2 Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	83.3333333	16.6666667	6	48.9897949
compete50	83.3333333	16.6666667	6	48.9897949
r2	0.9855600	0.0064111	5	1.4545589
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-8.8042000	0.0700431	5	-1.7789373
HillSlope	-0.8489600	0.0411990	5	-10.8513797
okr2	83.3333333	16.6666667	6	48.9897949
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	16.6666667	16.6666667	6	244.9489743
BADFIT70	16.6666667	16.6666667	6	244.9489743
BADFIT60	16.6666667	16.6666667	6	244.9489743

----- Chemical=E2 Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.9090909	9.0909091	11	33.1662479
compete50	90.9090909	9.0909091	11	33.1662479
r2	0.9831100	0.0047811	10	1.5379014
bind	90.9090909	9.0909091	11	33.1662479
Logic50	-8.7751000	0.0266289	10	-0.9596245
HillSlope	-0.8568700	0.0651899	10	-24.0583321
okr2	90.9090909	9.0909091	11	33.1662479
BADFIT90	9.0909091	9.0909091	11	331.6624790
BADFIT80	9.0909091	9.0909091	11	331.6624790
BADFIT70	9.0909091	9.0909091	11	331.6624790
BADFIT60	9.0909091	9.0909091	11	331.6624790

----- Chemical=E2 Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9971500	0.000581234	6	0.1427797
bind	100.0000000	0	6	0
Logic50	-8.9958333	0.0379354	6	-1.0329490
HillSlope	-0.9859333	0.0475970	6	-11.8251877
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=E2 Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	7	0
compete50	100.0000000	0	7	0
r2	0.9945143	0.0034972	7	0.9303863
bind	100.0000000	0	7	0
Logic50	-9.0027143	0.0308998	7	-0.9080940
HillSlope	-0.9693857	0.0130112	7	-3.5511543
okr2	100.0000000	0	7	0
BADFIT90	0	0	7	.
BADFIT80	0	0	7	.
BADFIT70	0	0	7	.
BADFIT60	0	0	7	.

----- Chemical=E2 Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9969000	0.000493288	3	0.0857057
bind	100.0000000	0	3	0
Logic50	-8.7773333	0.0264092	3	-0.5211381
HillSlope	-1.1410000	0.0151327	3	-2.2971678
okr2	100.0000000	0	3	0

----- Chemical=E2 Lab=JapanCER Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2 Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9974000	0.000702377	3	0.1219724
bind	100.0000000	0	3	0
Logic50	-8.7716667	0.0311787	3	-0.6156537
HillSlope	-0.9826667	0.0539887	3	-9.5160590
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2 Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	12	0
compete50	100.0000000	0	12	0
r2	0.9741417	0.0178877	12	6.3609736
bind	100.0000000	0	12	0
Logic50	-8.7793333	0.0205575	12	-0.8111470
HillSlope	-1.1744750	0.0621193	12	-18.3220076
okr2	91.6666667	8.3333333	12	31.4918329
BADFIT90	8.3333333	8.3333333	12	346.4101615
BADFIT80	8.3333333	8.3333333	12	346.4101615
BADFIT70	0	0	12	.
BADFIT60	0	0	12	.

----- Chemical=E2 Lab=Lovelace Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9244500	0.0169130	4	3.6590379
bind	100.0000000	0	4	0
Logic50	-8.7592500	0.0637827	4	-1.4563501
HillSlope	-0.8967500	0.0579179	4	-12.9172794
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=E2 Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	86.6666667	9.0851353	15	40.5998971
compete50	86.6666667	9.0851353	15	40.5998971
r2	0.8994733	0.0422893	15	18.2090666
bind	80.0000000	10.6904497	15	51.7549170
Logic50	-8.2442308	0.1862614	13	-8.1460014
HillSlope	-4.5209286	3.5660324	14	-295.1356440
okr2	66.6666667	12.5988158	15	73.1925055
BADFIT90	33.3333333	12.5988158	15	146.3850109
BADFIT80	13.3333333	9.0851353	15	263.8993315
BADFIT70	6.6666667	6.6666667	15	387.2983346
BADFIT60	6.6666667	6.6666667	15	387.2983346

----- Chemical=E2 Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.9090909	9.0909091	11	33.1662479
compete50	90.9090909	9.0909091	11	33.1662479
r2	0.9195273	0.0258102	11	9.3094222
bind	90.9090909	9.0909091	11	33.1662479
Logic50	-8.4980000	0.0552321	11	-2.1556138
HillSlope	-0.9536364	0.1425072	11	-49.5621867
okr2	72.7272727	14.0835758	11	64.2261629

----- Chemical=E2 Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	27.2727273	14.0835758	11	171.2697677
BADFIT80	9.0909091	9.0909091	11	331.6624790
BADFIT70	0	0	11	.
BADFIT60	0	0	11	.

----- Chemical=E2 Lab=Missouri Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9869833	0.0042740	6	1.0607151
bind	100.0000000	0	6	0
Logic50	-9.0015000	0.1045931	6	-2.8461893
HillSlope	-0.8672500	0.1051893	6	-29.7100099
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=E2 Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9853250	0.0019508	4	0.3959711
bind	100.0000000	0	4	0
Logic50	-9.1455000	0.0223998	4	-0.4898535
HillSlope	-0.9117750	0.0256617	4	-5.6289450
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=E2 Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	12	0
compete50	100.0000000	0	12	0
r2	0.9937417	0.0017026	12	0.5935289
bind	100.0000000	0	12	0
Logic50	-9.0478333	0.0248532	12	-0.9515411
HillSlope	-1.0587917	0.0545407	12	-17.8443389
okr2	100.0000000	0	12	0
BADFIT90	0	0	12	.
BADFIT80	0	0	12	.
BADFIT70	0	0	12	.
BADFIT60	0	0	12	.

----- Chemical=E2-TC Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9839333	0.0085762	3	1.5096962
bind	100.0000000	0	3	0
Logic50	-8.1120000	0.6595031	3	-14.0815196
HillSlope	-1.1735000	0.1914491	3	-28.2573100
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2-TC Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9807667	0.0095144	3	1.6802653
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.9510000	0.2437095	3	-4.7158673
HillSlope	-0.9743000	0.2204876	3	-39.1969371
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=E2-TC Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=E2-TC Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9420500	0.000050000	2	0.0075060
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-9.0795000	0.0545000	2	-0.8488864
HillSlope	-1.4690000	0	2	0
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	50.0000000	28.8675135	4	115.4700538
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	50.0000000	28.8675135	4	115.4700538
BADFIT60	50.0000000	28.8675135	4	115.4700538

----- Chemical=E2-TC Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	85.7142857	14.2857143	7	44.0958552
compete50	100.0000000	0	7	0
r2	0.9316286	0.0526271	7	14.9456681
bind	85.7142857	14.2857143	7	44.0958552
Logic50	-6.3666667	0.4957981	6	-19.0751662
HillSlope	-1.1120667	0.0662803	6	-14.5992175
okr2	85.7142857	14.2857143	7	44.0958552
BADFIT90	14.2857143	14.2857143	7	264.5751311
BADFIT80	14.2857143	14.2857143	7	264.5751311
BADFIT70	14.2857143	14.2857143	7	264.5751311
BADFIT60	0	0	7	.

----- Chemical=E2-TC Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9714000	0.0080481	4	1.6570073
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-8.9722500	0.3895293	4	-8.6829788
HillSlope	-0.7507250	0.1073326	4	-28.5943858
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=E2-TC Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9977250	0.000706370	4	0.1415961
bind	100.0000000	0	4	0
Logic50	-9.0545000	0.0257860	4	-0.5695727
HillSlope	-1.2182500	0.0434250	4	-7.1290758
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=EE2 Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9693333	0.0060711	6	1.5341473
bind	100.0000000	0	6	0
Logic50	-8.5160000	0.0571104	6	-1.6426889
HillSlope	-1.2835000	0.1046772	6	-19.9770731
okr2	100.0000000	0	6	0

----- Chemical=EE2 Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=EE2 Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.7563000	0.1127647	3	25.8249546
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-10.8163333	1.1254600	3	-18.0223165
HillSlope	-0.4253667	0.2432222	3	-99.0376768
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	66.6666667	33.3333333	3	86.6025404
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	0	0	3	.

----- Chemical=EE2 Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9018000	0.0817060	4	18.1206470
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-10.9000000	0.0800000	3	-1.2712300
HillSlope	-0.6014667	0.0604968	3	-17.4213244
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	0	0	4	.

----- Chemical=EE2 Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9915667	0.0047189	3	0.8242845
bind	100.0000000	0	3	0
Logic50	-8.7293333	0.0855499	3	-1.6974572
HillSlope	-1.1600000	0.0570468	3	-8.5179219
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=EE2 Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9986000	0.000288675	3	0.0500701
bind	100.0000000	0	3	0
Logic50	-8.6096667	0.0344206	3	-0.6924569
HillSlope	-1.0990000	0.0209523	3	-3.3021378
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=EE2 Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	77.7777778	14.6986184	9	56.6946710
compete50	88.8888889	11.1111111	9	37.5000000
r2	0.9410625	0.0170210	8	5.1157785
bind	88.8888889	11.1111111	9	37.5000000
Logic50	-7.8941250	0.3264953	8	-11.6981688
HillSlope	-0.9846500	0.1186120	8	-34.0715521
okr2	66.6666667	16.6666667	9	75.0000000

----- Chemical=EE2 Lab=Lovelace Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	33.3333333	16.6666667	9	150.0000000
BADFIT80	11.1111111	11.1111111	9	300.0000000
BADFIT70	11.1111111	11.1111111	9	300.0000000
BADFIT60	11.1111111	11.1111111	9	300.0000000

----- Chemical=EE2 Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9951750	0.000947255	4	0.1903695
bind	100.0000000	0	4	0
Logic50	-8.7880000	0.0947972	4	-2.1574227
HillSlope	-1.0060500	0.0932066	4	-18.5292170
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=EE2_2 Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9600000	0	3	0
bind	100.0000000	0	3	0
Logic50	-8.6056667	0.0176667	3	-0.3555746
HillSlope	-1.2120000	0	3	0
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ELactone Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	.	1	.
compete50	100.0000000	.	1	.
r2	0.9097000	.	1	.
bind	100.0000000	.	1	.
Logic50	-4.2730000	.	1	.
HillSlope	-0.8515000	.	1	.
okr2	100.0000000	.	1	.
BADFIT90	0	.	1	.
BADFIT80	0	.	1	.
BADFIT70	0	.	1	.
BADFIT60	0	.	1	.

----- Chemical=ELactone Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	100.0000000	0	3	0
r2	0.9582000	0.0149121	3	2.6955200
bind	100.0000000	0	3	0
Logic50	-4.5840000	0.2037376	3	-7.6981639
HillSlope	-0.9033667	0.2338941	3	-44.8451936
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ELactone Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9534500	0.0301500	2	4.4720267
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.5255000	0.3225000	2	-10.0780880
HillSlope	-1.0264500	0.1965500	2	-27.0800990
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=ELactone Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	33.3333333	33.3333333	3	173.2050808

----- Chemical=ELactone Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	100.0000000	0	3	0
r2	0.9761333	0.0156013	3	2.7682975
bind	100.0000000	0	3	0
Logic50	-4.5060000	0.0840179	3	-3.2295427
HillSlope	-0.7762000	0.1138539	3	-25.4059114
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=ELactone Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.8685000	.	1	.
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-4.8305000	0.7275000	2	-21.2988379
HillSlope	-1.5280000	1.2390000	2	-114.6734688
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=ELactone Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	100.0000000	0	4	0
r2	0.9702500	0.0106146	4	2.1880079
bind	100.0000000	0	4	0
Logic50	-3.8477500	0.0919650	4	-4.7801966
HillSlope	-0.8694750	0.0517571	4	-11.9053642
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Equol Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9754000	0.0158767	3	2.8192816
bind	100.0000000	0	3	0
Logic50	-6.7573333	0.0638757	3	-1.6372737
HillSlope	-0.9929333	0.0583530	3	-10.1789652
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9392333	0.0273423	3	5.0422236
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-6.0163333	0.5953722	3	-17.1402567
HillSlope	-0.9658667	0.2232130	3	-40.0279108
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Equol Lab=Dietrich Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9860667	0.0068810	3	1.2086600
bind	100.0000000	0	3	0
Logic50	-6.5550000	0.0843347	3	-2.2284043
HillSlope	-1.0667333	0.0666359	3	-10.8196389
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9931000	0.0044911	3	0.7832864
bind	100.0000000	0	3	0
Logic50	-6.9373333	0.1127613	3	-2.8153225
HillSlope	-0.9684000	0.0303291	3	-5.4245678
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9989333	0.000120185	3	0.0208389
bind	100.0000000	0	3	0
Logic50	-7.1170000	0.0345012	3	-0.8396494
HillSlope	-1.0042000	0.0383011	3	-6.6061970
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Equol Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	20.0000000	5	55.9016994
compete50	80.0000000	20.0000000	5	55.9016994
r2	0.9333750	0.0388118	4	8.3164471
bind	80.0000000	20.0000000	5	55.9016994
Logic50	-7.0025000	0.3716572	4	-10.6149864
HillSlope	-0.8396500	0.0373012	4	-8.8849337
okr2	60.0000000	24.4948974	5	91.2870929
BADFIT90	40.0000000	24.4948974	5	136.9306394
BADFIT80	20.0000000	20.0000000	5	223.6067977
BADFIT70	20.0000000	20.0000000	5	223.6067977
BADFIT60	20.0000000	20.0000000	5	223.6067977

----- Chemical=Equol Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9937750	0.000923196	4	0.1857959
bind	100.0000000	0	4	0
Logic50	-6.2280000	0.0561649	4	-1.8036267
HillSlope	-1.1567500	0.0518787	4	-8.9697280
okr2	100.0000000	0	4	0

----- Chemical=Equol Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Gen Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9874667	0.0016171	6	0.4011421
bind	100.0000000	0	6	0
Logic50	-7.1271667	0.0336634	6	-1.1569573
HillSlope	-1.5204000	0.1693076	6	-27.2768517
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=Gen Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9607500	0.0171646	4	3.5731709
bind	100.0000000	0	4	0
Logic50	-6.6797500	0.2957069	4	-8.8538309
HillSlope	-1.4975750	0.4977005	4	-66.4675215
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Gen Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9856333	0.0069688	3	1.2246288
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-7.1453333	0.1559074	3	-3.7792429
HillSlope	-0.8666667	0.0392460	3	-7.8433904
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Gen Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9602500	0.0250504	6	6.3900717
bind	83.3333333	16.6666667	6	48.9897949
Logic50	-6.1668000	0.0621590	5	-2.2538712
HillSlope	-1.4342000	0.1626922	5	-25.3654118
okr2	83.3333333	16.6666667	6	48.9897949
BADFIT90	16.6666667	16.6666667	6	244.9489743
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=Gen Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9974000	0.000873689	3	0.1517219
bind	100.0000000	0	3	0
Logic50	-6.8490000	0.0204287	3	-0.5166245
HillSlope	-0.8468000	0.0321332	3	-6.5725503
okr2	100.0000000	0	3	0

----- Chemical=Gen Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Gen Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	13.3333333	10	52.7046277
compete50	80.0000000	13.3333333	10	52.7046277
r2	0.9597625	0.0133952	8	3.9475755
bind	80.0000000	13.3333333	10	52.7046277
Logic50	-6.6215000	0.1267234	8	-5.4130925
HillSlope	-0.7464375	0.0767378	8	-29.0777728
okr2	70.0000000	15.2752523	10	69.0065559
BADFIT90	30.0000000	15.2752523	10	161.0152972
BADFIT80	20.0000000	13.3333333	10	210.8185107
BADFIT70	20.0000000	13.3333333	10	210.8185107
BADFIT60	20.0000000	13.3333333	10	210.8185107

----- Chemical=GenB Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9923750	0.0021581	4	0.4349315
bind	100.0000000	0	4	0
Logic50	-7.1850000	0.0745464	4	-2.0750565
HillSlope	-0.9311000	0.0798155	4	-17.1443377
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=GenW Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9919500	0.0010571	4	0.2131395
bind	100.0000000	0	4	0
Logic50	-6.7372500	0.0270073	4	-0.8017315
HillSlope	-1.1122500	0.0192673	4	-3.4645643
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=HPTE Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9800333	0.0105256	3	1.8602260
bind	100.0000000	0	3	0
Logic50	-7.0833333	0.0153007	3	-0.3741398
HillSlope	-1.0740333	0.1519296	3	-24.5010807
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Heptylph Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9127333	0.0450112	3	8.5415615
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-4.5380000	.	1	.
HillSlope	-0.6666000	.	1	.
okr2	66.6666667	33.3333333	3	86.6025404

----- Chemical=Heptylph Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Heptylph Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9619000	0.0092197	3	1.6601552
bind	100.0000000	0	3	0
Logic50	-3.6620000	0.1334516	3	-6.3119873
HillSlope	-0.4612000	0.1612769	3	-60.5680539
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Heptylph Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9195000	0.0425266	4	9.2499316
bind	100.0000000	0	4	0
Logic50	-3.4065000	0.0549886	4	-3.2284536
HillSlope	-0.7399750	0.1253028	4	-33.8667682
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Heptylph Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9054250	0.0822589	4	18.1702393
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-3.3696667	0.0272356	3	-1.3999438
HillSlope	-0.6230667	0.0059145	3	-1.6441556
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	0	0	4	.

----- Chemical=Heptylph Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.9143500	0.0023500	2	0.3634715
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-5.9545000	0.3635000	2	-8.6332459
HillSlope	-1.1677500	0.8102500	2	-98.1260149
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	33.3333333	33.3333333	3	173.2050808

----- Chemical=Heptylph Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=Heptylph Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Hexestro Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9909667	0.0020691	3	0.3616428
bind	100.0000000	0	3	0
Logic50	-7.5040000	0.0598025	3	-1.3803423
HillSlope	-1.3126667	0.0782397	3	-10.3236465
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Hexestro Lab=Dietrich Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	28.8675135	4	115.4700538
compete50	50.0000000	28.8675135	4	115.4700538
r2	0.9008750	0.0653107	4	14.4993975
bind	50.0000000	28.8675135	4	115.4700538
Logic50	-8.1757500	0.1395847	4	-3.4146036
HillSlope	-1.4729500	0.3783081	4	-51.3674027
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Hexestro Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9316250	0.0291139	4	6.2501382
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-8.0140000	0.0504050	4	-1.2579243
HillSlope	-0.8712000	0.0336362	4	-7.7218126
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	50.0000000	28.8675135	4	115.4700538
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Hexestro Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9779000	0.0185476	3	3.2851395
bind	100.0000000	0	3	0
Logic50	-7.5670000	0.1135444	3	-2.5989783
HillSlope	-1.1550667	0.0855188	3	-12.8237591
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Hexestro Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9941667	0.0037777	3	0.6581582
bind	100.0000000	0	3	0
Logic50	-7.4520000	0.0309246	3	-0.7187741
HillSlope	-0.9909333	0.0207285	3	-3.6231329
okr2	100.0000000	0	3	0

----- Chemical=Hexestro Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Hexestro Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	80.0000000	13.3333333	10	52.7046277
compete50	90.0000000	10.0000000	10	35.1364184
r2	0.9691667	0.0116073	9	3.5929701
bind	80.0000000	13.3333333	10	52.7046277
Logic50	-6.8607500	0.0961912	8	-3.9655972
HillSlope	-0.8201444	0.0704985	9	-25.7876086
okr2	80.0000000	13.3333333	10	52.7046277
BADFIT90	20.0000000	13.3333333	10	210.8185107
BADFIT80	10.0000000	10.0000000	10	316.2277660
BADFIT70	10.0000000	10.0000000	10	316.2277660
BADFIT60	10.0000000	10.0000000	10	316.2277660

----- Chemical=Hexestro Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9981250	0.000249583	4	0.0500104
bind	100.0000000	0	4	0
Logic50	-7.5967500	0.0277079	4	-0.7294679
HillSlope	-1.1772500	0.0109116	4	-1.8537399
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Kepone Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.8465333	0.1182282	3	24.1900934
bind	100.0000000	0	3	0
Logic50	-5.1653333	0.1239494	3	-4.1562970
HillSlope	-1.9260000	0.7732328	3	-69.5367880
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9754333	0.0030661	3	0.5444433
bind	100.0000000	0	3	0
Logic50	-5.8926667	0.1019515	3	-2.9966942
HillSlope	-1.7130000	0.2635014	3	-26.6431905
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9763000	0.0079000	3	1.4015366
bind	100.0000000	0	3	0
Logic50	-5.3120000	0.0626844	3	-2.0439111
HillSlope	-0.9930333	0.000088192	3	-0.0153824
okr2	100.0000000	0	3	0

----- Chemical=Kepone Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9866667	0.0042729	3	0.7500913
bind	100.0000000	0	3	0
Logic50	-5.6760000	0.0445459	3	-1.3593320
HillSlope	-1.3013333	0.0908448	3	-12.0912764
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	100.0000000	0	3	0
r2	0.8320000	0.0465717	3	9.6952512
bind	100.0000000	0	3	0
Logic50	-6.4586667	0.8957720	3	-24.0223357
HillSlope	-0.4047667	0.1147029	3	-49.0829251
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	66.6666667	33.3333333	3	86.6025404
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Kepone Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9892250	0.0043592	4	0.8813287
bind	100.0000000	0	4	0
Logic50	-5.0780000	0.0632363	4	-2.4905998
HillSlope	-1.0488500	0.0327387	4	-6.2427803
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NE Lab=Ceetox Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9686000	0.0048521	3	0.8676611
bind	100.0000000	0	3	0
Logic50	-6.2420000	0.0471487	3	-1.3082977
HillSlope	-1.2315333	0.1932327	3	-27.1766002
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9075800	0.0421207	5	10.3775699
bind	60.0000000	24.4948974	5	91.2870929
Logic50	-6.1573333	0.0893315	3	-2.5128839
HillSlope	-1.0842000	0.2323628	3	-37.1208503
okr2	60.0000000	24.4948974	5	91.2870929

----- Chemical=NE Lab=Ceetox Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	40.0000000	24.4948974	5	136.9306394
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=NE Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9806000	0.0020801	5	0.4743365
bind	100.0000000	0	5	0
Logic50	-6.1968000	0.0521070	5	-1.8802415
HillSlope	-0.9993400	0.0695314	5	-15.5579700
okr2	100.0000000	0	5	0
BADFIT90	0	0	5	.
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=NE Lab=Dietrich Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9658667	0.0093364	3	1.6742544
bind	100.0000000	0	3	0
Logic50	-5.4440000	0.1018692	3	-3.2410475
HillSlope	-1.0132667	0.1816238	3	-31.0462841
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE Lab=Dietrich Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9814200	0.0061659	5	1.4048405
bind	100.0000000	0	5	0
Logic50	-6.2140000	0.0732168	5	-2.6346596
HillSlope	-1.0818600	0.0676442	5	-13.9812015
okr2	100.0000000	0	5	0
BADFIT90	0	0	5	.
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=NE Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	90.0000000	10.0000000	10	35.1364184
compete50	90.0000000	10.0000000	10	35.1364184
r2	0.9769400	0.0047892	10	1.5502130
bind	90.0000000	10.0000000	10	35.1364184
Logic50	-6.3017000	0.0512304	10	-2.5708116
HillSlope	-0.8936000	0.0688590	10	-24.3678607
okr2	90.0000000	10.0000000	10	35.1364184
BADFIT90	0	0	10	.
BADFIT80	0	0	10	.
BADFIT70	0	0	10	.
BADFIT60	0	0	10	.

----- Chemical=NE Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9960000	0.000699524	6	0.1720357
bind	100.0000000	0	6	0
Logic50	-6.3643333	0.0464232	6	-1.7867243
HillSlope	-0.9721500	0.0409278	6	-10.3124329
okr2	100.0000000	0	6	0

----- Chemical=NE Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=NE Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	7	0
compete50	100.0000000	0	7	0
r2	0.9820429	0.0051054	7	1.3754503
bind	100.0000000	0	7	0
Logic50	-6.2771429	0.0472614	7	-1.9920193
HillSlope	-1.3751857	0.3694483	7	-71.0790123
okr2	100.0000000	0	7	0
BADFIT90	0	0	7	.
BADFIT80	0	0	7	.
BADFIT70	0	0	7	.
BADFIT60	0	0	7	.

----- Chemical=NE Lab=JapanCER Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9965333	0.0011215	3	0.1949264
bind	100.0000000	0	3	0
Logic50	-6.5583333	0.0267665	3	-0.7069007
HillSlope	-0.9013333	0.0252825	3	-4.8584204
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE Lab=JapanCER Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9976000	0.000568624	3	0.0987255
bind	100.0000000	0	3	0
Logic50	-6.6156667	0.0052387	3	-0.1371558
HillSlope	-0.9322667	0.0118679	3	-2.2049334
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	12	0
compete50	100.0000000	0	12	0
r2	0.9923833	0.0017122	12	0.5976925
bind	100.0000000	0	12	0
Logic50	-6.7563333	0.0200874	12	-1.0299213
HillSlope	-0.8494083	0.0209760	12	-8.5545356
okr2	100.0000000	0	12	0
BADFIT90	0	0	12	.
BADFIT80	0	0	12	.
BADFIT70	0	0	12	.
BADFIT60	0	0	12	.

----- Chemical=NE Lab=Lovelace Task=st1 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9486750	0.0060014	4	1.2652259
bind	100.0000000	0	4	0
Logic50	-5.8945000	0.2011419	4	-6.8247332
HillSlope	-0.8362750	0.1531589	4	-36.6288260
okr2	100.0000000	0	4	0

----- Chemical=NE Lab=Lovelace Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NE Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	73.3333333	11.8187368	15	62.4187784
compete50	80.0000000	10.6904497	15	51.7549170
r2	0.9210286	0.0218585	14	8.8799488
bind	80.0000000	10.6904497	15	51.7549170
Logic50	-6.2142857	0.1395146	14	-8.4002547
HillSlope	-0.8939143	0.1337942	14	-56.0022415
okr2	60.0000000	13.0930734	15	84.5154255
BADFIT90	40.0000000	13.0930734	15	126.7731382
BADFIT80	20.0000000	10.6904497	15	207.0196678
BADFIT70	6.6666667	6.6666667	15	387.2983346
BADFIT60	6.6666667	6.6666667	15	387.2983346

----- Chemical=NE Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	11	0
compete50	100.0000000	0	11	0
r2	0.9409727	0.0269309	11	9.4922560
bind	90.9090909	9.0909091	11	33.1662479
Logic50	-6.0062000	0.0909260	10	-4.7872716
HillSlope	-0.9526900	0.0897896	10	-29.8039981
okr2	90.9090909	9.0909091	11	33.1662479
BADFIT90	9.0909091	9.0909091	11	331.6624790
BADFIT80	9.0909091	9.0909091	11	331.6624790
BADFIT70	9.0909091	9.0909091	11	331.6624790
BADFIT60	0	0	11	.

----- Chemical=NE Lab=Missouri Task=st1 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	6	0
compete50	100.0000000	0	6	0
r2	0.9925333	0.0020755	6	0.5122208
bind	100.0000000	0	6	0
Logic50	-6.4551667	0.0411140	6	-1.5601197
HillSlope	-0.9169000	0.0412637	6	-11.0235492
okr2	100.0000000	0	6	0
BADFIT90	0	0	6	.
BADFIT80	0	0	6	.
BADFIT70	0	0	6	.
BADFIT60	0	0	6	.

----- Chemical=NE Lab=Missouri Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9929250	0.0018723	4	0.3771345
bind	100.0000000	0	4	0
Logic50	-6.3227500	0.0451966	4	-1.4296489
HillSlope	-0.9361000	0.0399054	4	-8.5258904
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NE Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	12	0
compete50	100.0000000	0	12	0
r2	0.9891417	0.0019721	12	0.6906398
bind	100.0000000	0	12	0
Logic50	-6.3605000	0.0644884	12	-3.5122124
HillSlope	-0.8636000	0.0494641	12	-19.8411963
okr2	100.0000000	0	12	0

----- Chemical=NE Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	12	.
BADFIT80	0	0	12	.
BADFIT70	0	0	12	.
BADFIT60	0	0	12	.

----- Chemical=NE-TC Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	2	0
compete50	100.0000000	0	2	0
r2	0.9620500	0.0234500	2	3.4471502
bind	100.0000000	0	2	0
Logic50	-6.3230000	0.0220000	2	-0.4920560
HillSlope	-0.7806500	0.0159500	2	-2.8894775
okr2	100.0000000	0	2	0
BADFIT90	0	0	2	.
BADFIT80	0	0	2	.
BADFIT70	0	0	2	.
BADFIT60	0	0	2	.

----- Chemical=NE-TC Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9708667	0.0137458	3	2.4522906
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-6.3570000	0.0030000	2	-0.0667397
HillSlope	-0.8174000	0.0490000	2	-8.4776688
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE-TC Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9543750	0.0342504	4	7.1775480
bind	100.0000000	0	4	0
Logic50	-6.6175000	0.2655766	4	-8.0264926
HillSlope	-0.7605750	0.2096682	4	-55.1341182
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NE-TC Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9938333	0.0013017	3	0.2268615
bind	100.0000000	0	3	0
Logic50	-6.7920000	0.0711501	3	-1.8144221
HillSlope	-0.9104000	0.0482930	3	-9.1878142
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NE-TC Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.8643500	0.1027147	4	23.7669301
bind	100.0000000	0	4	0
Logic50	-5.8570000	0.2069481	4	-7.0666915
HillSlope	-0.6067150	0.1838085	4	-60.5913763
okr2	75.0000000	25.0000000	4	66.6666667

----- Chemical=NE-TC Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=NE-TC Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9922750	0.0030880	4	0.6224042
bind	100.0000000	0	4	0
Logic50	-6.3530000	0.0849166	4	-2.6732764
HillSlope	-0.9021000	0.0494450	4	-10.9621925
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=NPhenol Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9733000	0.0031765	3	0.5652746
bind	100.0000000	0	3	0
Logic50	-5.7906667	0.1059502	3	-3.1690846
HillSlope	-1.2124667	0.4049297	3	-57.8456154
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=Dietrich Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	66.6666667	33.3333333	3	86.6025404
compete50	66.6666667	33.3333333	3	86.6025404
r2	0.8759000	0.0889500	3	17.5894426
bind	66.6666667	33.3333333	3	86.6025404
Logic50	-5.9363333	0.2019054	3	-5.8910162
HillSlope	-0.8561333	0.1023169	3	-20.6998144
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9769000	0.0065531	3	1.1618723
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-6.0190000	0.0953100	3	-2.7426782
HillSlope	-0.6698333	0.1806994	3	-46.7251473
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=Freyberg Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9898000	0.0041065	3	0.7185962
bind	100.0000000	0	3	0
Logic50	-5.6130000	0.4671427	3	-14.4150178
HillSlope	-0.8113000	0.1103011	3	-23.5482797
okr2	100.0000000	0	3	0

----- Chemical=NPhenol Lab=Freyberg Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=JapanCER Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9966333	0.000448454	3	0.0779369
bind	100.0000000	0	3	0
Logic50	-6.1463333	0.0197005	3	-0.5551656
HillSlope	-0.8015000	0.0280885	3	-6.0699555
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=NPhenol Lab=Lovelace Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.9362667	0.0192137	3	3.5544545
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-5.1596667	0.4293803	3	-14.4138866
HillSlope	-0.4412000	0.1650677	3	-64.8018203
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	25.0000000	25.0000000	4	200.0000000
BADFIT60	25.0000000	25.0000000	4	200.0000000

----- Chemical=NPhenol Lab=Missouri Task=st2 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9897750	0.000612883	4	0.1238428
bind	100.0000000	0	4	0
Logic50	-5.4487500	0.0735803	4	-2.7008144
HillSlope	-0.6828500	0.0573711	4	-16.8034125
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Nethdron Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9744000	0.0053013	3	0.9423284
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-6.2610000	0.1220000	3	-3.3750231
HillSlope	-0.9959000	0.0579219	3	-10.0736647
okr2	33.3333333	33.3333333	3	173.2050808
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=OTES Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	2	.
compete50	0	0	2	.
r2	.	.	0	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	2	.

----- Chemical=OTES Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	2	0
BADFIT80	100.0000000	0	2	0
BADFIT70	100.0000000	0	2	0
BADFIT60	100.0000000	0	2	0

----- Chemical=OTES Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=OTES Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=OTES Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=OTES Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	25.0000000	25.0000000	4	200.0000000
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.8377000	.	1	.
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-10.8900000	.	1	.
HillSlope	0.1640000	.	1	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	75.0000000	25.0000000	4	66.6666667
BADFIT70	75.0000000	25.0000000	4	66.6666667
BADFIT60	75.0000000	25.0000000	4	66.6666667

----- Chemical=OTES Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.

----- Chemical=OTES Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=Progeste Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Progeste Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	0	0	3	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Progeste Lab=Freyberg Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	3	.
compete50	0	0	3	.
r2	.	.	0	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-8.4380000	.	1	.
HillSlope	3.8610000	.	1	.
okr2	0	0	3	.
BADFIT90	100.0000000	0	3	0
BADFIT80	100.0000000	0	3	0
BADFIT70	100.0000000	0	3	0
BADFIT60	100.0000000	0	3	0

----- Chemical=Progeste Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	5	.
compete50	0	0	5	.
r2	.	.	0	.
bind	0	0	5	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	5	.
BADFIT90	100.0000000	0	5	0
BADFIT80	100.0000000	0	5	0
BADFIT70	100.0000000	0	5	0
BADFIT60	100.0000000	0	5	0

----- Chemical=Progeste Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	25.0000000	25.0000000	4	200.0000000
r2	0.9172000	0.0504000	2	7.7710819
bind	25.0000000	25.0000000	4	200.0000000
Logic50	-6.0510000	0.4030000	2	-9.4187418
HillSlope	-0.6380000	0.1315000	2	-29.1487592
okr2	25.0000000	25.0000000	4	200.0000000

----- Chemical=Progeste Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	75.0000000	25.0000000	4	66.6666667
BADFIT80	50.0000000	28.8675135	4	115.4700538
BADFIT70	50.0000000	28.8675135	4	115.4700538
BADFIT60	50.0000000	28.8675135	4	115.4700538

----- Chemical=Progeste Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	0	0	4	.
compete50	0	0	4	.
r2	.	.	0	.
bind	0	0	4	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	0	0	4	.
BADFIT90	100.0000000	0	4	0
BADFIT80	100.0000000	0	4	0
BADFIT70	100.0000000	0	4	0
BADFIT60	100.0000000	0	4	0

----- Chemical=SDS Lab=Ceetox Task=st2 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	50.0000000	2	141.4213562
compete50	50.0000000	50.0000000	2	141.4213562
r2	0.9645000	.	1	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	50.0000000	50.0000000	2	141.4213562
BADFIT90	50.0000000	50.0000000	2	141.4213562
BADFIT80	50.0000000	50.0000000	2	141.4213562
BADFIT70	50.0000000	50.0000000	2	141.4213562
BADFIT60	50.0000000	50.0000000	2	141.4213562

----- Chemical=SDS Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	50.0000000	50.0000000	2	141.4213562
compete50	50.0000000	50.0000000	2	141.4213562
r2	0.9635000	.	1	.
bind	0	0	2	.
Logic50	.	.	0	.
HillSlope	.	.	0	.
okr2	50.0000000	50.0000000	2	141.4213562
BADFIT90	50.0000000	50.0000000	2	141.4213562
BADFIT80	50.0000000	50.0000000	2	141.4213562
BADFIT70	50.0000000	50.0000000	2	141.4213562
BADFIT60	50.0000000	50.0000000	2	141.4213562

----- Chemical=Tamox Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9819333	0.0032835	3	0.5791758
bind	100.0000000	0	3	0
Logic50	-7.4833333	0.3612747	3	-8.3618649
HillSlope	-1.0290000	0.0985106	3	-16.5816638
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Tamox Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9861667	0.000753510	3	0.1323426
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-7.5576667	0.0806749	3	-1.8488918
HillSlope	-1.3776333	0.2425314	3	-30.4926321
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Tamox Lab=Dietrich Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Tamox Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.9919667	0.0024333	3	0.4248789
bind	100.0000000	0	3	0
Logic50	-7.9670000	0.0587736	3	-1.2777560
HillSlope	-1.2283333	0.0636667	3	-8.9775225
okr2	100.0000000	0	3	0
BADFIT90	0	0	3	.
BADFIT80	0	0	3	.
BADFIT70	0	0	3	.
BADFIT60	0	0	3	.

----- Chemical=Tamox Lab=JapanCER Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9935500	0.0022824	4	0.4594353
bind	100.0000000	0	4	0
Logic50	-6.7752500	0.5318064	4	-15.6985031
HillSlope	-1.0292750	0.0375022	4	-7.2871028
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Tamox Lab=Lovelace Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9719600	0.0164627	5	3.7873702
bind	100.0000000	0	5	0
Logic50	-7.3392000	0.1843745	5	-5.6174217
HillSlope	-0.7728000	0.0517416	5	-14.9712245
okr2	100.0000000	0	5	0
BADFIT90	0	0	5	.
BADFIT80	0	0	5	.
BADFIT70	0	0	5	.
BADFIT60	0	0	5	.

----- Chemical=Tamox Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9945000	0.0016975	4	0.3413871
bind	100.0000000	0	4	0
Logic50	-8.3590000	0.1089472	4	-2.6067050
HillSlope	-1.3082500	0.1070890	4	-16.3713419
okr2	100.0000000	0	4	0
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Zear Lab=Ceetox Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	33.3333333	33.3333333	3	173.2050808
compete50	33.3333333	33.3333333	3	173.2050808
r2	0.9897000	.	1	.
bind	33.3333333	33.3333333	3	173.2050808
Logic50	-7.9260000	.	1	.
HillSlope	-1.1700000	.	1	.
okr2	33.3333333	33.3333333	3	173.2050808

----- Chemical=Zear Lab=Ceetox Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	66.6666667	33.3333333	3	86.6025404
BADFIT80	66.6666667	33.3333333	3	86.6025404
BADFIT70	66.6666667	33.3333333	3	86.6025404
BADFIT60	66.6666667	33.3333333	3	86.6025404

----- Chemical=Zear Lab=Dietrich Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	3	0
compete50	100.0000000	0	3	0
r2	0.8620333	0.1227738	3	24.6684826
bind	100.0000000	0	3	0
Logic50	-8.7210000	0.0670025	3	-1.3307157
HillSlope	-0.5536333	0.0782468	3	-24.4796230
okr2	66.6666667	33.3333333	3	86.6025404
BADFIT90	33.3333333	33.3333333	3	173.2050808
BADFIT80	33.3333333	33.3333333	3	173.2050808
BADFIT70	33.3333333	33.3333333	3	173.2050808
BADFIT60	0	0	3	.

----- Chemical=Zear Lab=Freyberg Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	75.0000000	25.0000000	4	66.6666667
compete50	75.0000000	25.0000000	4	66.6666667
r2	0.8926000	0.0452041	4	10.1286462
bind	75.0000000	25.0000000	4	66.6666667
Logic50	-7.6603333	0.0650880	3	-1.4716811
HillSlope	-1.4730000	0.1928963	3	-22.6820279
okr2	50.0000000	28.8675135	4	115.4700538
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	25.0000000	25.0000000	4	200.0000000
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Zear Lab=JapanCER Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	5	0
compete50	100.0000000	0	5	0
r2	0.9349000	0.0607059	5	14.5194668
bind	100.0000000	0	5	0
Logic50	-6.2976000	0.4104180	5	-14.5725771
HillSlope	-1.1038400	0.0628188	5	-12.7253205
okr2	80.0000000	20.0000000	5	55.9016994
BADFIT90	20.0000000	20.0000000	5	223.6067977
BADFIT80	20.0000000	20.0000000	5	223.6067977
BADFIT70	20.0000000	20.0000000	5	223.6067977
BADFIT60	0	0	5	.

----- Chemical=Zear Lab=Lovelace Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9562750	0.0285363	4	5.9682151
bind	100.0000000	0	4	0
Logic50	-7.4335000	0.2134215	4	-5.7421546
HillSlope	-0.8229000	0.2003813	4	-48.7012636
okr2	75.0000000	25.0000000	4	66.6666667
BADFIT90	25.0000000	25.0000000	4	200.0000000
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

----- Chemical=Zear Lab=Missouri Task=st3 -----

Variable	Mean	Std Error	N	Coeff of Variation
compete20	100.0000000	0	4	0
compete50	100.0000000	0	4	0
r2	0.9954500	0.0012652	4	0.2542047
bind	100.0000000	0	4	0
Logic50	-7.8375000	0.0968827	4	-2.4722848
HillSlope	-1.0195000	0.0400115	4	-7.8492313
okr2	100.0000000	0	4	0

----- Chemical=Zear Lab=Missouri Task=st3 -----

The MEANS Procedure

Variable	Mean	Std Error	N	Coeff of Variation
BADFIT90	0	0	4	.
BADFIT80	0	0	4	.
BADFIT70	0	0	4	.
BADFIT60	0	0	4	.

**Protocol for *In Vitro* Estrogen Receptor (ER) Binding
Assay Using the CERI Human Recombinant ER α Ligand
Binding Domain Protein**

Table of Contents

	Page
1.0 Purpose of the Assay.....	7
2.0 Safety and Operating Precautions.....	8
3.0 Detailed Summary of the Assays.....	9
4.0 Terminology.....	10
5.0 Equipment and Materials	11
5.1 Equipment	11
5.2 Reagents (ACS Reagent Grade or Better)	11
5.3 Supplies.....	12
5.4 Software	12
5.4.1 Nonlinear Curve-Fitting Software	12
5.4.2 Spreadsheet Software	12
6.0 Preparation of Buffer Solutions	13
7.0 Demonstrating Receptor Protein Performance	14
8.0 Demonstration of Acceptable Laboratory Performance	15
9.0 CERi-hrER α Saturation Binding Assay: Working Protocol.....	17
9.1 Summary of Saturation Binding Assay Steps.....	17
9.2 Day Before Binding Assay	18
9.2.1 Preparation of Assay Buffer	18
9.2.2 Preparation of 0.4% DCC Suspension.....	18
9.2.3 Preparation of Unlabeled 17 β -Estradiol Stock Solution	18
9.3 Day of the Assay	18
9.3.1 Preparation of Working Assay Buffer	19
9.3.2 Preparation of [^{3} H]-17 β -Estradiol	19
9.3.3 Preparation of Unlabeled 17 β -Estradiol	21
9.3.4 Determination of Receptor (hrER α) Concentration	22
9.3.5 Preparation of hrER α for Saturation Analysis.....	24
9.3.6 Preparation of hrER α Saturation Microtiter Plates.....	24
9.3.7 Determine dpms of [^{3} H]-17 β -Estradiol only	26
9.3.8 Incubation of Saturation Binding Microtiter Plate	26
9.3.9 Separation of Bound [^{3} H]-17 β -Estradiol-hrER α and Free [^{3} H]-17 β - Estradiol.....	26
9.3.10 Quantification of [^{3} H]-17 β -Estradiol-Bound to hrER α	27
9.4 Data Analysis	27
9.4.1 Terminology	27
9.4.2 Approach to Saturation Binding Assay Analysis	28
9.4.3 Performance Criteria for the Saturation Binding Assay.....	29
9.5 Test Report.....	29

Table of Contents (Continued)

	Page
9.5.1	Radioactive Ligand ($[^3\text{H}]$ -17 β -Estradiol) 29
9.5.2	Unlabeled 17 β -Estradiol 29
9.5.3	hrER α 29
9.5.4	Test Conditions 29
9.5.5	Results 30
9.5.6	Discussion 30
9.5.7	Conclusion 30
10.0	CERI-hrER α Competitive Binding Assay: Working Protocol 32
10.1	Summary of Events to Prepare for Competitive Binding Assay 32
10.2	Day Before Binding Assay 33
10.2.1	Preparation of Assay Buffer 33
10.2.2	Preparation of 0.4% DCC Suspension 33
10.2.3	Preparation of Stock Standard: Unlabelled 17 β -Estradiol 33
10.2.4	Preparation of Stock Weak Positive: Norethynodrel 34
10.2.5	Preparation of Stock Negative: Dibutyl Phthalate 34
10.2.6	Preparation of Stock Test Compounds 34
10.3	Day of the Assay 34
10.3.1	Preparation of Working Assay Buffer 34
10.3.2	Preparation of $[^3\text{H}]$ -17 β -Estradiol 34
10.3.3	Preparation of Unlabeled 17 β -Estradiol, Norethynodrel, DBP and Test Compounds 37
10.3.4	Preparation of hrER α Solution 46
10.3.5	Conduct Competitive Binding Assay 47
10.4	Data Analysis 50
10.4.1	Terminology 50
10.4.2	Approach to Competitive Binding Assay Analysis 50
10.4.3	Performance criteria for the Competitive Binding Assay 52
10.4.4	Classification Criteria for Test Compound hrER α Binding 53
10.5	Test Report 54
10.5.1	Test Compound(s) 54
10.5.2	Solvent 54
10.5.3	$[^3\text{H}]$ -17 β -Estradiol 54
10.5.4	Unlabeled 17 β -estradiol 55
10.5.5	hrER α 55
10.5.6	Test Conditions 55
10.5.7	Results 55
10.5.8	Discussion 56
10.5.9	Conclusion 56
10.5.10	Replicate Studies 56
11.0	References 57
	Appendix A: Buffer Preparation Worksheet 58
	Appendix B: Typical $[^3\text{H}]$ -17 β -Estradiol Saturation Assay with Three Replicate Wells 59

Table of Contents (Continued)

	Page
Appendix C: Competitive Binding Assay Well Layout	61

List of Tables

		Page
1	Summary of Saturation Binding Assay Conditions	17
2	Sample Saturation Binding Assay Microtiter Plate	19
3	Reagent Volumes for Saturation Microtiter Plate.....	25
4	Summary of Competitive Binding Assay Conditions.....	32
5	Example Layout of Dilution Plate for Negative and Positive Controls Including Total Binding and Non-Specific Binding	38
6	Sample Competitive Binding Assay Microtiter Plate Layout*+	48
7	Additions Required for Preparation of Competitive Binding Assay Microtiter Plate	49

List of Figures

		Page
1	Competitive Binding Curves for 17β -estradiol (E_2), hexestrol (hex), norethynodrel (Nor), nonylphenol mixture (NP), ortho, para - dichloro-diphenyl-trichloroethane (o,p'-DDT), and 4-n-heptylphenol (HP).	37
2	Format of Dilution Plate for Unlabeled 17β -Estradiol Standard Curve	40
3	Set up of Dilution Plate for Norethynodrel.....	42
4	Set up of Dilution Plate for DBP	43

1.0 Purpose of the Assay

This assay is a screening procedure for identifying compounds that can bind to the recombinant human estrogen receptor- α . It is used to determine the ability of a compound to compete with 17 β -estradiol for binding to the recombinant human estrogen receptor- α (hrER α)-ligand binding domain (LBD). This protein construct was produced by the Chemicals Evaluation Research Institute (CERI), Japan, and exists as a glutathione-S-transferase (GST) fusion protein, and is expressed in *E. coli*. The quantitative assay results are the IC₅₀ (the concentration of test compound needed to displace half of the radiolabeled ligand from the receptor) and the relative binding affinities (RBAs) of test compounds for the hrER α (relative to estradiol-17 β). For chemical screening purposes, acceptable qualitative assay results may include classifications of test chemicals as either hrER α binders, non-binders, or equivocal based upon criteria described for the binding curves.

*** It should be noted that the CERI binding assay utilizes DMSO as the base solvent for this interlaboratory validation effort (unless otherwise specified for a particular test chemical). If another solvent is required, because it is more compatible with a specific test chemical, that solvent shall also be tested with the standards in that run.**

2.0 Safety and Operating Precautions

Laboratories are reminded to follow all standard operating procedures and other applicable safety measures as described by national legislation and as provided by their institutions for the handling and disposal of radioactive materials, as well as for other occupational health and safety concerns.

3.0 Detailed Summary of the Assays

Binding assays include both the saturation binding assay as well as the competitive binding assay.

- **Saturation binding:** The purpose of the saturation binding assay is to determine how much receptor in the reaction can be bound by [^3H]-17 β -estradiol. The amount of receptor is held constant while the amount of [^3H]-17 β -estradiol is added in increasing concentrations. This is considered the total binding. The values in the total binding curve can be adjusted to account for the non-specific binding. To do so, a large amount of cold estradiol is added to each of the dose response tubes. Any remaining hot estradiol that can bind to the receptor is considered to be binding at a non-specific site as the cold estradiol should be at such a high concentration that it is bound to all of the available specific sites on the receptor. Once the non-specific binding is determined, it can be subtracted from the total binding to reveal the specific binding. The specific binding curve will reach a plateau. At this point the receptor is saturated and the maximum amount of receptor that can be bound by estradiol (or B_{max}) is determined. The saturation assay establishes the amount of active receptor protein in the assay and the K_d , or binding affinity, of the [^3H]-17 β -estradiol for the receptor. By performing the saturation binding assay before the competitive binding assay, a more accurate calculation for receptor concentration can be used in the competitive binding assays.
- **Competitive binding:** The competitive binding assay is used to indicate whether a chemical compound can bind to the hrER α and give an indication of the affinity that the compound has for the receptor. The assay works by measuring how well a given compound competes with the radiolabeled ligand (in this case tritiated 17 β -estradiol ([^3H]-17 β -estradiol)) for the receptor (hrER α). A chemical with high affinity will bind to the receptor and displace the hot estradiol at lower concentrations. As the compound's concentration increases, if it is a binder, it will displace a greater amount of hot estradiol. Test compounds are always run with a standard (17 β -estradiol, the native ligand), a weak positive (norethynodrel), and a negative (dibutyl phthalate (DBP)). By incorporating these three standards into the assay run, the technician can determine if the run was performed correctly and the standards provide references for the test compound (i.e., is it strong, weak or negative?).

4.0 Terminology

<i>Term</i>	<i>Meaning</i>
[³ H]E ₂	17β-Estradiol radiolabeled with tritium
BSA	Bovine Serum Albumin
DCC	Dextran-coated charcoal
DTT	Dithiothreitol
E ₂	Unlabeled 17β-estradiol (inert)
EDTA	Disodium salt dihydrate, Ethylenediaminetetraacetic acid
EGTA	Ethyleneglycol-bis(β-aminoethyl)-N,N,N',N'-tetraacetic acid
hrERα	Human recombinant estrogen receptor alpha (ligand binding domain)
Ultrapure water	Ultrapure water produced by a filter system (e.g., Milli-Q)
Assay buffer	10 mM Tris-HCl, pH 7.4, containing 1 mM EDTA, 1mM EGTA, 1 mM NaVO ₃ , 10 % Glycerol, 0.2 mM Leupeptin, 1 mM DTT and 10 mg/mL BSA
Tris	Tris(hydroxymethyl)aminomethane
RT	Room temperature
replicate	One of multiple wells that contain the same contents at the same concentrations and are assayed concurrently within a single run. In this protocol, each concentration of test compound is tested in triplicate; that is, there are three replicates that are assayed simultaneously at each concentration of test compound.
run	A complete set of concurrently-run microtiter plate assay wells that provides all the information necessary to characterize binding of a test compound to the hrERα (viz., total [³ H]-17β-estradiol added to the assay well, maximum binding of [³ H]-17β-estradiol to the hrERα, nonspecific binding, and total binding at various concentrations of test compound). A run could consist of as few as one assay well (i.e., replicate) per concentration, but since this protocol requires assaying in triplicate, one run consists of three assay wells per concentration. In addition, this protocol requires three independent (i.e., non-concurrent) runs per chemical.

5.0 Equipment and Materials

5.1 Equipment

- Pipettes:
Mechanical, variable volume pipettor (must be calibrated on a regular basis. Check volumes on a high sensitivity scale; for example, 10 microliters (μL) = 10 μg . Pipettors needed include:
0.5 to 2 μL
2 to 20 μL
20 to 100 μL
40 to 200 μL
200 to 1000 μL
- Multi-Channel micropipettor for eight wells
- Balance, analytical
- Rotator(s) for incubation of DCC in refrigerator overnight prior to the assay
- pH Meter with Tris-Compatible Electrode with traceable standards (pH: 4, 7, and 9)
- Liquid scintillation counter (LSC) with traceable standards
- Ice bath tubs
- Freezer -80°C, Freezer -20°C, refrigerator 4°C
- Traceable Thermometers for monitoring refrigerator and freezer temperatures
- -80°C freezer (temperature recorded daily during the business week and monitored for off-hour emergencies)
- -20°C freezer (temperature recorded daily during the business week and monitored for off-hour emergencies)
- 4°C refrigerator (temperature recorded daily during the business week and monitored for off-hour emergencies)
- Filter apparatus equipped with vacuum pump or equivalent, such as a vacuum manifold, for 96-well microtiter plates for separation of cold 17 β -estradiol from [^3H]-17 β -estradiol (choose a filter unit that provides low cross-talk, or contamination among wells (e.g., Millipore MultiScreen).

5.2 Reagents (ACS Reagent Grade or Better)

- DTT, dithiothreitol, CAS 3483-12-3, Mol. Wt. 154.3
- Unlabeled 17 β -estradiol (E_2), CAS 50-28-2, Mol. Wt. 272.4
- [^3H]-17 β -estradiol ([^3H] E_2), CAS 50-28-2, Mol. Wt. 272.4 (obtain highest specific activity available). (e.g., PerkinElmer NEN, catalog # NET 517, estradiol, [2,4,6,7,16, 17 β - ^3H (N)]- Specific Activity: 110-170 Ci (4.07-6.29 TBq)/mmol)
- EDTA disodium salt dihydrate, ethylenediaminetetraacetic acid, CAS 6381-92-6, Mol. Wt. 372.2
- EGTA, ethyleneglycol-bis(β -aminoethyl)-N,N,N',N'-tetraacetic Acid, CAS 67-42-5, Mol.Wt. 380.4
- NaVO_3 , sodium metavanadate, CAS 13718-26-8, Mol. Wt. 121.93
- BSA, bovine serum albumin, CAS 9048-46-8, Mol. Wt. ~66 kDa
- Leupeptin hemisulfate monohydrate, CAS 54577-99-0, Mol. Wt. 493.61
- Ethyl alcohol (ethanol), 200 Proof USP, CAS 64-17-5
- Dimethyl sulfoxide (DMSO), CAS 67-68-5, Mol. Wt. 78.13

- Glycerol 99%, CAS 56-81-5, Mol. Wt. 92.10
- Dextran, CAS 9004-54-0, Mol. Wt. 64,000-76,000*
- Activated charcoal*
- Norethynodrel, CAS 68-23-5, Mol. Wt. 298.4; (weak positive control for assay standardization)
- Di-n-butylphthalate CAS 84-74-2, Mol. Wt. 278.34; (negative control for assay standardization)
- Scintillation cocktail (e.g., PerkinElmer Optifluor, catalog # 6013199)
- Tris Base, Tris(hydroxymethyl)aminomethane, CAS 77-86-1, Mol. Wt. 121.1
- HCl, hydrochloric acid, CAS 7647-01-0, Mol. Wt. 36.46
- NaOH, sodium hydroxide, CAS 1310-73-2, Mol. Wt. 40.0
- Accurate pH standards, commercial grade, including pH 4, 7, and 10

** Note: assay performance is improved by making up the dextran charcoal mixture by hand rather than purchasing a read- made mix. Therefore the dextran and charcoal shall be purchased separately for this protocol.*

5.3 Supplies

- 1000 milliliter (mL) graduated cylinders
- 500 mL Erlenmeyer flasks
- Pipette tips
- Gloves
- 96-Well polypropylene microtiter plates
- 96-well Filters for microplate vacuum unit (use one that is has low protein-binding capacity, pore size 0.45 μm , and is a hydrophilic PVDF)
- Polypropylene 96-well microtiter plates with U-shaped bottoms to receive the filtrate.
- 6 mL polypropylene LSC vials
- Polypropylene tray (pipetting reservoir)
- Ice
- Screw-cap amber glass vials for stock solutions of unlabeled 17β -estradiol

5.4 Software

5.4.1 Nonlinear Curve-Fitting Software

Select a statistical package capable of analyzing saturation and competitive binding data. K_d and B_{max} should be analyzed using nonlinear regression and then graphed as a Scatchard plot. For example:

- GraphPad Prism (GraphPad Software Inc., San Diego, CA)
- KELL (includes Radlig and Ligand) (Biosoft, Cambridge, UK)
- Statistical Analysis System (SAS Institute Inc., Cary, NC)

5.4.2 Spreadsheet Software

For example, Microsoft Excel or compatible.

6.0 Preparation of Buffer Solutions

Unless otherwise specified, prepare buffer stock solutions at least one day and not more than four weeks before assay.

Assay Buffer (10 mM Tris-HCl; 1 mM EDTA·2Na·2H₂O; 1mM EGTA; 1 mM NaVO₃; 10 % Glycerol; 0.2 mM Leupeptin; 10 mg / mL BSA; 1 mM DTT)

To prepare 1 liter of assay buffer add the following to 800 mL of ultra pure water (e.g., MilliQ):

- 1.21 g of Tris
- 372 mg of EDTA·2Na·2H₂O
- 380 mg of EGTA
- 121 mg of NaVO₃
- 100 mL of Glycerol
- 10.0 g of BSA
- 98.7 mg of Leupeptin
- 154 mg of DTT

Mix well and adjust the pH to 7.4 with HCl.

Bring the final volume up to 1 liter with ultra pure water.

Store at 4°C.

Note: *This assay is performed at room temperature (RT)! Remove assay buffer from cold and dispense needed volume to appropriate container and allow it to warm to room temperature before diluting [³H]E₂, controls, and test compounds.*

Note: *Be sure to use ice cold assay buffer during the preparation of receptor solution to avoid any degradation of the receptor protein.*

7.0 Demonstrating Receptor Protein Performance

Prior to routinely conducting the saturation and competitive binding assays, each new batch of receptor protein must be shown to be performing correctly in the laboratory in which it will be used. A two-step process is required to demonstrate performance. These steps are:

- 1) Conduct a saturation radioligand binding assay to demonstrate hrER α specificity and saturation. Nonlinear regression analysis of these data (e.g., BioSoft; McPherson, 1985; Motulsky, 1995) and the subsequent Scatchard plot should document hrER α binding affinity of the radioligand (K_d) and the number of receptors (B_{max}) for a particular batch of hrER α .
- 2) Conduct a competitive binding assay using 17 β -estradiol and norethynodrel, which have known affinities for the hrER α using the competitive binding assay protocol described in this method. Consistency of IC₅₀ values (i.e., the concentration of a substance that inhibits [³H]-17 β -estradiol binding by 50%) from these assays with values obtained using previous batches of protein will assist in documenting that the laboratory is performing the assay correctly. Therefore, binding results should be within an acceptable range of those from background data, which will be established through this inter-laboratory validation effort.

Each assay (saturation and competitive binding) consists of three runs, and each run contains three replicates.

Considerations for evaluating saturation binding assays are given in [Section 9.4](#), but there are no specific performance criteria. Criteria for acceptable performance of known standards in the competitive binding assay are discussed in [Section 10.4](#) as are criteria for the classification of a compound as equivocal, binder, or non-binder.

8.0 Demonstration of Acceptable Laboratory Performance

Each assay (saturation and competitive binding) consists of three runs, and each run contains three replicates.

The laboratory must prove its capability to adequately perform studies using the hrER α binding assay by performing saturation and competitive binding experiments. Performance criteria for known standards in the saturation and competitive binding assays are discussed in the performance criteria sections of each of the working protocols. Criteria for the classification of a test compound binding to hrER α as equivocal, positive, or negative are listed following the performance criteria in the competitive binding assay protocol. Before using the competitive binding assay for test compounds, a laboratory must meet the performance criteria for each of the standards (estradiol and norethynodrel) in the competitive binding assays. This will demonstrate that the laboratory is capable of performing the assay correctly and consistently.

CERI-hrER α Saturation Binding Assay Working Protocol

9.0 CER1-hrER α Saturation Binding Assay: Working Protocol

The Saturation Binding Assay measures total and non-specific binding of increasing concentrations of [^{3} H]-17 β -estradiol under equilibrium conditions. Three concurrent replicates are required at each concentration within one run. Three non-concurrent runs are required for each chemical tested.

9.1 Summary of Saturation Binding Assay Steps

The Day Before the Binding Assay:

- Prepare Assay Buffer.
- Label microtiter plates.
- Calculate radioisotope dilutions.
- Prepare 0.4% DCC suspension.
- Label LSC vials.
- Prepare the unlabeled 17 β -estradiol stock solution.

The Morning of the Binding Assay:

- Prepare the [^{3} H]-17 β -estradiol dilutions for Saturation binding ([Table 2](#)).
- Prepare the unlabeled 17 β -estradiol dilutions.
- Prepare hrER α dilution in ice-cold assay buffer (**immediately prior to use**).

After Two-hour Assay Incubation

- Separate bound and free [^{3} H]-17 β -estradiol.
- Dispense 1 mL scintillation cocktail per vial.
- Quantify [^{3} H]-17 β -estradiol bound to hrER α .

Following the Binding Assay:

- Record raw data output from LSC into spreadsheet.
- Begin data analysis and determine if the runs meet performance criteria.
- If performance criteria are not met, determine potential areas for error and repeat experiment.

Table 1. Summary of Saturation Binding Assay Conditions

	<i>CERI Protocol</i>
Type of Receptor	hrER α
Concentration of [^{3} H]-17 β -estradiol	0.0313 to 4.0 nM
Concentration of unlabeled 17 β -estradiol	2,000x concentration of [^{3} H]-E ₂
Concentration of hrER α	TBD (0.0625 to 8.0 nM)
Solvent (unless otherwise specified)	DMSO
Temperature	Room temperature
Incubation time	2 hours
DCC Concentration	DCC: 0.2% (as the final concentration after addition to the reaction wells)

Table 1. Summary of Saturation Binding Assay Conditions

		<i>CERI Protocol</i>
Composition of assay buffer	Tris-HCl	10 mM (pH 7.4)
	EDTA·2Na·2H ₂ O	1 mM
	EGTA	1 mM
	Sodium Metavanadate (NaVO ₃)	1 mM
	Glycerol	10 %
	Leupeptin	0.2 mM
	Bovine Serum Albumin (BSA)	10 mg/mL
	Dithiothreitol (DTT)	1 mM

9.2 Day Before Binding Assay

The day before the binding assay, prepare assay buffer, the 0.4% dextran-coated charcoal (DCC) suspension, and the unlabeled 17 β -Estradiol Stock Solution.

9.2.1 Preparation of Assay Buffer

Prepare assay buffer as described in [Section 6.0](#).

9.2.2 Preparation of 0.4% DCC Suspension

- Prepare DCC suspension the day before binding assay. DCC is used to separate the bound and free [³H]-17 β -estradiol. Prepare an adequate amount of DCC suspension for the number of microtiter plates in the next day's run.
- Add 200 mg of charcoal and 20 mg of dextran to 50 mL of assay buffer. This amount of suspension is enough for 4 microtiter plates. Preparing the DCC solution prior to use give optimal performance in this assay. Pre-prepared DCC solutions from the manufacturer should not be used in this protocol.
- Cap the container and sonicate the tube for approximately 2 minutes to disrupt the clump of charcoal. This sonication step should not exceed 2 minutes. Rotate the container at 4°C overnight prior to use.

9.2.3 Preparation of Unlabeled 17 β -Estradiol Stock Solution

- To prepare the unlabeled 17 β -estradiol stock solution (10 mM), dissolve 10.88 mg of 17 β -estradiol (MW = 272.4) in 4 mL DMSO in a glass vial. Divide the stock solution in amber or aluminum-covered glass vials, and store the aliquots at 4 °C until use. This 10 mM stock solution can be stored for 6 months.

9.3 Day of the Assay

On the day of the assay, prepare the working assay buffer and dilutions of the three reagents used in the assay ([³H]-17 β -estradiol, hrER α , and unlabeled 17 β -estradiol).

When all reagents, except for the hrER α solution, have been prepared, set up the microtiter plate as depicted in Table 2. Table 2 represents the wells on a microtiter plate. Lanes 1, 2, and 3 are used to measure total binding. Lanes 4, 5, and 6 are used for the measurement of non-specific binding. Lanes 7, 8 and 9 are used for determining the

disintegrations per minute (dpm) of [^3H]-17 β -estradiol added to the assay wells. Lane 10 is not used. Lane 11 is used to make dilutions of unlabeled 17 β -estradiol. Lane 12 is used to make dilutions of [^3H]-17 β -estradiol.

Note: *hrER α* solution should be prepared with ice-cold assay buffer, just prior to use.

Table 2. Sample Saturation Binding Assay Microtiter Plate

	1*	2*	3*	4*	5*	6*	7*	8*	9*	10	11**	12**
	For measurement of TB			For measurement of NSB			For determination of hot ligand alone				unlabeled E ₂ dilutions	[^3H]E ₂ dilutions
A	0.0313 nM [^3H] E ₂ + ER			0.0313 nM [^3H] E ₂ + 0.0625 μM E ₂ + ER			0.0313 nM				0.625 μM	0.313 nM
B	0.0625 nM [^3H] E ₂ + ER			0.0625 nM [^3H] E ₂ + 0.125 μM E ₂ + ER			0.0625 nM				1.25 μM	0.625 nM
C	30.125 nM [^3H] E ₂ + ER			0.125 nM [^3H] E ₂ + 0.25 μM E ₂ + ER			0.125 nM				2.5 μM	1.25 nM
D	0.250 nM [^3H] E ₂ + ER			0.250 nM [^3H] E ₂ + 0.5 μM E ₂ + ER			0.250 nM				5 μM	2.5 nM
E	0.50 nM [^3H] E ₂ + ER			0.50 nM [^3H] E ₂ + 1 μM E ₂ + ER			0.50 nM				10 μM	5 nM
F	1.00 nM [^3H] E ₂ + ER			1.00 nM [^3H] E ₂ + 2 μM E ₂ + ER			1.00 nM				20 μM	10 nM
G	2.00 nM [^3H] E ₂ + ER			2.00 nM [^3H] E ₂ + 4 μM E ₂ + ER			2.00 nM				40 μM	20 nM
H	4.00 nM [^3H] E ₂ + ER			4.00 nM [^3H] E ₂ + 8 μM E ₂ + ER			4.00 nM				80 μM	40 nM

*The indicated concentrations here are the final concentrations.

**The dilutions of unlabeled E₂ and [^3H]E₂ can be prepared in a different plate.

9.3.1 Preparation of Working Assay Buffer

Take the necessary volume of assay buffer stock and split this into two volumes, one to be kept at RT and one to be kept ice-cold.

9.3.2 Preparation of [^3H]-17 β -Estradiol

Note the specific activity of the purchased estradiol [2,4,6,7,16,17- ^3H]-solution, and calculate the dpm of 10 μL of a 40 nM solution. Prepare dilutions of [^3H]-17 β -estradiol. Measure triplicate 10 μL samples of a 40 nM dilution by LSC. If the average of the actual counts is not within 6% of the counts calculated based on the specific activity of the purchased [^3H]-17 β -estradiol, adjust the concentration appropriately. Dilution and calculation procedures are presented below.

Note: Always store stock [³H]-17β-estradiol solution at -20°C to prevent degradation of the tritiated hormone.

Example calculation:

Manufacturers usually provide the specific activity and specific concentration of each batch of [³H]-17β-estradiol. For example, the following specifications might be given by the manufacturer on the purchased vial of estradiol [2,4,6,7,16,17-³H]:

5.88 TBq/mmol and
37 MBq/mL toluene: ethanol (9:1 v/v).

A 1 μM of stock solution of [³H]-17β-estradiol in DMSO is needed to prepare a series of dilutions for the saturation analysis. Based on the sample specifications above, the concentration of original stock solution is calculated as follows:

- 1) $(37 \times 10^6) \div (5.88 \times 10^{12}) \text{ mmol/mL} = (37 \times 10^6 \times 10^3) / (5.88 \times 10^{12} \times 10^3) \text{ M} =$
 $(37 \times 10^9) \div (5.88 \times 10^{15}) = 6.29 \times 10^{-6} \text{ M} = 6.29 \text{ μM}$
- 2) To prepare 20 μL of 1 μM stock solution, mix 16.8 μL of DMSO and 3.2 μL of [³H]-17β-estradiol original solution (at 6.29 μM).

$$\begin{aligned} \{(6.29 \text{ μM})(X \text{ μL}) &= (1 \text{ μM})(20 \text{ μL}) \\ X &= \mathbf{3.2 \text{ μL}} \text{ } [^3\text{H}]\text{-17}\beta\text{-estradiol} \\ 20 \text{ μL} - 3.2 \text{ μL} &= \mathbf{16.8 \text{ μL DMSO}} \end{aligned}$$

Note: the above volumes are only an example. A larger volume of 1 μM stock solution may need to be prepared depending on the size of the assay being performed, and this should be calculated prior to setting up the assay.

- 3) Next, prepare 40 nM [³H]-17β-estradiol by following these steps:
 - a) Prepare 40 nM [³H]-17β-estradiol by mixing 60 μL of DMSO and 15 μL of 1 μM stock solution [³H]-17β-estradiol on a microtiter plate in the well labeled “H12”. Add 300 μL of RT assay buffer and gently mix in the well. The concentration of DMSO in “H12” is 20%.
 - b) Measure triplicate 10 μL samples of the 40 nM [³H]-17β-estradiol dilution by LSC. Average the three values and compare the average to the nominal value as calculated below in step e.
 - c) Calculate the moles of radioligand in 10 μL as in the following example:

10 μL of the 40 nM aliquot contains:

$$40 \times 10^{-9} \text{ moles/L} \times 10 \text{ } \mu\text{L} \times 10^{-6} \text{ L/ } \mu\text{L} \times 1 \text{ pmol/} 10^{-12} \text{ moles} \\ = 0.4 \text{ pmol}$$

The nominal radioactivity in this aliquot (given that there are 60 dpm per Bq) is calculated as:

$$5.88 \times 10^{12} \text{ Bq/mmol} \times 10^3 \text{ mmol/moles} \times 0.4 \times 10^{-12} \text{ moles} \times \\ 60 \text{ dpm/Bq} = 141,120 \text{ dpm}$$

A deviation within 6% from the nominal values is considered acceptable. In case of a more pronounced deviation, adjust the concentration, either by adding a small amount of stock [³H]-17β-estradiol or adding assay buffer. **After the concentration is adjusted, confirm the final concentration by measuring the dpm of three additional 10 μL aliquots.**

- d) If the deviation is less than 6% from the nominal values, set up a microtiter plate and prepare the series of [³H]-17β-estradiol dilutions. As shown in [Table 2](#), the dilutions can be prepared in Lane 12 of the microtiter plate. The concentrations in the dilution series will be 40.0, 20.0, 10.0, 5.00, 2.50, 1.25, 0.625 and 0.313 nM. Prepare the dilutions as below,
 - i. Label the polypropylene microtiter plate lid with numbers across the top (1-12) and letters down the left side (A-H).
 - ii. Add 150 μL of RT assay buffer to each well of the microtiter plate from “A12” to “G12”.
 - iii. Add 300 μL of 40 nM [³H]-17β-estradiol in “H12”.
 - iv. Add 150 μL of this 40 nM solution from well H12 into well G12 and mixing to make a 1:2 dilution. Continue by then taking 150 μL from well G12 to F12 and so on.

9.3.3 Preparation of Unlabeled 17β-Estradiol

- 4) Preparation of 80 μM of 17β-estradiol
 - a) Using the 17β-estradiol stock solution (10 mM) prepared above ([Section 9.2.3](#)), make a secondary stock by adding 10 μL of 10 mM unlabeled 17β-estradiol stock solution to 90 μL of RT assay buffer to prepare 1 mM of unlabeled 17β-estradiol solution.
 - b) Add 50 μL of 1 mM unlabeled 17β-estradiol solution to 450 μL of RT assay buffer to prepare 100 μM of unlabeled 17β-estradiol solution.
 - c) Dilute the 100 μM 17β-estradiol solution 8:10 with assay buffer to obtain a stock of 80 μM 17β-estradiol (e.g., Add 320 μL of 100 μM unlabeled 17β-estradiol solution to 80 μL of RT assay buffer).
- 5) Prepare the series of unlabeled 17β-estradiol dilutions.

- a) Add 300 μL of 80 μM 17 β -estradiol to “H11”
- b) Add 150 μL of RT assay buffer to each well of the plate from “A11” to “G11”.
- c) Prepare the serial dilutions by adding 150 μL of 80 μM of 17 β -estradiol from “H11” well into well G11 and mixing to make a 1:2 dilution.
- d) Continue by then taking 150 μL from well G11 to F11 and so on.

9.3.4 Determination of Receptor (hrER α) Concentration

1) Aliquot Procedure

It is strongly recommended to aliquot only one vial of original receptor first. The other vials of original receptor should not be touched. Store unused vials at -80°C until confirming the necessary amount of protein needed for each plate.

To aliquot the original receptor from the manufacturer for storage and future use, the preparation is thawed on ice and aliquoted. **The container (such as 1.5 mL microtube) to store the receptor should be cooled on ice before adding the receptor.** Snap freeze the aliquot in liquid nitrogen. Aliquots are kept at -80°C . **This aliquot procedure should be performed as quickly as possible to avoid damage to the receptor.**

Example (**before** determining receptor concentration):

When aliquoting the first vial of original receptor to determine receptor concentration, divide the vial contents into 5-10 μL aliquots. This amount will be enough to prepare 1-4 plates of assay for future use.

Example (**after** determining receptor concentration):

Once the receptor concentration is determined, prepare aliquots corresponding to 6 pmolar per aliquot. Use a 6 pmolar aliquot at a nominal concentration that corresponds to “40% specific binding” per well (see below) to prepare a 9 mL hrER α solution with ice-cold assay buffer. This volume should be sufficient for 2 plates with comfortable reserve.

2) Determination of Receptor Concentration

Determination of receptor concentration must be performed before working on the saturation binding assay.

Under conditions corresponding to competitive binding (i.e., 0.5 nM [^3H]-E2), nominal concentrations of 0.1, 0.2, 0.4 and 0.6 nM receptor are incubated in the absence (for TB, as vehicle control (final DMSO conc.: 2.05% [0.05% DMSO is from hot ligand.])) and presence (for NSB) of 1 μM unlabeled E2. Specific binding, calculated as the difference of TB and NSB, is plotted against the nominal receptor concentration. The concentration of receptor that gives a specific binding value corresponding to 40% (acceptable range 30-50%) of added radiolabel is related to the

corresponding nominal receptor concentration (“40% specific binding”), and this receptor concentration shall be used for saturation and competitive binding experiments. If the 40% criterion repeatedly cannot be met, the experimental set up should be checked for potential errors. Failure to meet the 40% criterion may indicate that there is very little active receptor in the recombinant batch, and the use of another receptor batch should be considered.

For this determination, the TB and NSB wells can be prepared as below:

- a) Prepare 5 nM of [^3H]-17 β -Estradiol as described in 10.3.2).
- b) Prepare RT assay buffer containing 20% DMSO by adding 40 μL of DMSO to 160 μL of RT binding buffer (for TB well).
- c) Prepare 10 μM of unlabeled E2 (for NSB) according to the following procedure,
 - To Prepare 1 mM of E2, add 10 μL of 10 mM E2 stock to 90 μL of 100 % DMSO.
 - To prepare 100 μM of unlabeled E2, add 10 μL of 1 mM E2 to 90 μL of 100% DMSO.
 - To prepare 10 μM of unlabeled E2 containing 20% DMSO, add 20 μL of 100 μM E2 and 20 μL of DMSO to 160 μL of RT binding buffer (this volume is enough to prepare the 4 nominal hrER concentrations (as listed above - 0.1, 0.2, 0.4. and 0.6 nM) in triplicate).
- d) Prepare wells for TB and NSB except for the hrER α solution according to the following procedure:
 - For TB wells
 - Add 50 μL of RT binding buffer to wells.
 - Add 10 μL of 20% DMSO contained RT buffer to the wells
 - Add 10 μL of 5 nM of [^3H]-17 β -Estradiol to the wells
 - For NSB wells
 - Add 50 μL of RT binding buffer to wells.
 - Add 10 μL of 10 μM of E2 to the wells
 - Add 10 μL of 5 nM of [^3H]-17 β -Estradiol to the wells
- e) Prepare the 4 nominal concentrations of hrER listed above with ice-cold assay buffer to achieve the desired final concentrations.

- f) Add 30 μ L of hrER solution to the corresponding TB and NSB wells.

Note: The DMSO concentration used in this procedure corresponds to both the saturation binding and competitive binding assays. Although the saturation binding assay uses 2.08% of DMSO as final concentration, it can be regarded the same as that is used in the competitive binding assay for this determination test for hrER (i.e., 2.05%).

9.3.5 Preparation of hrER α for Saturation Analysis

The hrER α solution should be prepared with ice-cold assay buffer just prior to use (i.e. the TB, NSB and hot ligand only wells are prepared by adding the buffer and [^{3} H]-17 β -Estradiol with/without Unlabeled 17 β -Estradiol in the 96-well plate).

- 1) The final nominal receptor concentration is determined according to the 40% criterion above.
- 2) Dilute the functional recombinant hrER into 9 mL ice cold assay buffer, so that the final concentration per well is equivalent to 40% specific binding. Frequently, a final nominal receptor concentration of 0.2 nM will comply with this condition.

Caution! Do not vortex! Avoid foaming! Only mix/stir gently in order to obtain a homogenous receptor solution.

- 3) Add 30 μ L of this receptor solution to the reaction well to obtain the nominal concentration that corresponds to “40% specific binding” in the assay well (See Section 9.3.4). The 9 mL receptor solution is sufficient for 2 microtiter plates (2x96 wells plus reserve). Use receptor solution immediately after preparation.
- 4) Be sure to record your dilution calculations for further analysis of any discrepancies in the data.

9.3.6 Preparation of hrER α Saturation Microtiter Plates

After the buffer, [^{3} H]-17 β -Estradiol and Unlabeled 17 β -Estradiol have been prepared, set up the microtiter plate as depicted in [Table 2](#). After all wells for TB, NSB and hot ligand only have been prepared, the hrER α solution should be prepared as described in Section 9.3.5, then added.

Following the protocol outlined below, add the volume of each component specified in the top of Table 3. Following the two hour incubation period, add the volume of each component specified in the bottom of Table 3.

Table 3. Reagent Volumes for Saturation Microtiter Plate										
Lane Number		1	2	3	4	5	6	7*	8*	9*
Preparation Steps		TB Wells			NSB Wells			Hot Ligand Alone		
Volume of components for reaction wells above	Buffer	60 μ L			50 μ L			90 μ L		
	unlabeled E ₂ from lane 11	-			10 μ L			-		
	[³ H]E ₂ from lane12 ⁺	10 μ L			10 μ L			10 μ L		
	hrER α	30 μ L			30 μ L			-		
Total reaction volume		100 μ L			100 μ L			100 μ L		
FOLLOWING 2 HOUR INCUBATION REACTION								*Quantify the radio-activity just after the preparation. <u>Do not incubate for 2-hr!</u>		
Treatment with 0.4% DCC		Yes			Yes			No		
Volume of 0.4% DCC		100 μ L			100 μ L			-		
Filtration		Yes			Yes			No		
MEASURING THE DPMS										
Quantification volume added to scintillation cocktail		100 μ L**			100 μ L**			50 μ L		

* If an LSC for microplates is used for measuring dpms, the preparation of hot ligand alone in the same assay plate of TB and NSB wells is not appropriate. The hot ligand alone should be prepared in a different plate.

** If centrifugation is used to separate DCC, the 50 μ L of supernatant should be measured by LSC.

9.3.6.1 Set Up Total Binding (TB) Wells (A1-H3 in [Table 2](#))

- For measurement of total binding, add 60 μ L of assay buffer to each well from “A1” to “H3” as illustrated in Table 2 using a multi-channel pipettor.
- Add 10 μ L of the appropriate [³H]-17 β -estradiol dilution solution to the wells as shown in Column 12 of [Table 2](#) using the multi-channel pipettor.
- Add 30 μ L of the of hrER α solution using a multi-channel pipettor and mix each well gently by pipetting.

9.3.6.2 Set up Non-specific Binding (NSB) wells (A4-H6 in [Table 2](#))

- Add 50 μ L of assay buffer to each well from “A4” to “H6” as illustrated in [Table 2](#) using a multi-channel pipettor.
- Add 10 μ L of the appropriate unlabeled 17 β -estradiol dilution to the wells as shown in [Table 2](#) using a multi-channel pipettor.
- Add 10 μ L of the appropriate [³H]-17 β -estradiol dilution solution to the wells as shown in Column 12 of [Table 2](#) using a multi-channel pipettor.

- Add 30 μL of the hrER α solution using a multi-channel pipettor and mix each well gently by pipetting.

9.3.6.3 Set up Wells to Determine dpms of Total [^3H]-17 β -Estradiol Per Well (A7-H9 in [Table 2](#))

- Add 90 μL assay buffer to each well from “A7” to “H9” as illustrated in [Table 2](#) using a multi-channel pipettor.
- Add 10 μL of the appropriate [^3H]-17 β -estradiol dilution solution from Column 12 using a multi-channel pipettor and mix by pipetting (each concentration should be measured in triplicate).

Note: In order to determine dpms of hot ligand alone, these wells will **not** be incubated for 2 hours and will **not** be treated with DCC suspensions.

9.3.7 Determine dpms of Total [^3H]-17 β -Estradiol

- Dispense 1 mL of scintillation cocktail into 6 mL LSC vials.
- Pipette a 50 μL aliquot of the setup plate (see table 3, columns 7-9) each from A7-H9 as prepared in section 9.3.6.3 into the respective 6 mL LSC vials containing 1 mL scintillation cocktail.
- Cap and shake vials well.
- Place vials in LSC for determination of dpms/vial with quench correction. Count radioactivity for 2 minutes per vial.

9.3.8 Incubation of Saturation Binding Microtiter Plate

Place the lid on the microtiter plate and incubate at room temperature (22 to 28°C) for two hours.

9.3.9 Separation of Bound [^3H]-17 β -Estradiol-hrER α and Free [^3H]-17 β -Estradiol

Note: To minimize dissociation of bound [^3H]-17 β -estradiol from the hrER α during this process, it is extremely important that the DCC suspension, as well as the microtiter plates be kept ice-cold and that each step be conducted quickly but gently.

- Add 100 μL of ice-cold DCC suspension to the TB and NSB wells (A1 to H6) and mix well using multi-channel pipette.

Note: To avoid the sedimentation of charcoal in the stock container during the procedure above, be sure to re-suspend the DCC mixture using the multi-channel pipettor prior to the addition of DCC to each well.

- Immediately place microtiter plates on ice for 10 minutes.
- Transfer a 150 μL aliquot of the reaction mixture and DCC suspension from the microtiter plate to a microtiter plate filter (it is not necessary to re-suspend the DCC).

- Filter to remove DCC.
- Keep filtrates.

Note: If a microtiter plate filter is not available, this step can be replaced by centrifugation with the following protocol modifications.

- After centrifugation, remove 50 μ L of the supernatant for measurement by LSC. Using a smaller volume (50 μ L) by this method, prevents disruption of the DCC pellet and contamination of the supernatant volume used for scintillation counting.

9.3.10 Quantification of [^{3} H]-17 β -Estradiol-Bound to hrER α

- Dispense 1 mL of scintillation cocktail into 6 mL LSC vials.
- Pipette a 100 μ L aliquot of the filtrate saved in step 9.3.8 (or 50 μ L of the centrifuged supernatant) into the respective 6 mL LSC vials containing 1 mL scintillation cocktail.
- Cap and shake vials well.
- Place vials in LSC for determination of dpms/vial with quench correction. Count radioactivity for 2 minutes per vial.

Note: An LSC for microplates can be used in this step if available. The volume of filtrate counted may need to be adjusted to 50 μ L. If so, be sure to account for this change in the data spreadsheet. Also, be sure to use microtiter plates that are compatible with the scintillation fluid – some microtiter plates corrode in the presence of scintillation cocktail, altering the results of the assay.

9.4 Data Analysis

9.4.1 Terminology

- **Total [^{3} H]-17 β -Estradiol Per Well (Hot Ligand Alone)**

Radioactivity in dpms added to each assay well. (Dpms in the defined volume of the well can be converted to concentration of [^{3} H]-17 β -estradiol.) There are three replicates of the Total [^{3} H]-17 β -Estradiol wells at each concentration of [^{3} H]-17 β -estradiol for each run (note that three replicates are included in each run).

- **Total Binding (TB)**

Radioactivity in dpms in the wells that have only [^{3} H]-17 β -estradiol available to bind to the receptor. There are three replicates of the Total Binding wells at each concentration of [^{3} H]-17 β -estradiol for each run (note that three replicates are included in each run).

- **Non-Specific Binding (NSB)**

Radioactivity in dpms in the wells that contain 2000-fold excess of unlabeled over labeled 17 β -estradiol. There are three replicates of the NSB wells per concentration of [^{3} H]-17 β -estradiol for each run (note that three replicates are included in each run).

- **Specific Binding**

Total binding minus non-specific binding.

- **K_d**
Dissociation constant, representing affinity of the radioligand ($[^3\text{H}]$ -17 β -estradiol) for the hrER α . Unit is nM.
- **B_{max}**
Maximum number of receptors bound. Unit is fmol hrER α .

9.4.2 Approach to Saturation Binding Assay Analysis

hrER α saturation binding experiments measure total and non-specific binding. From these values we calculate the specific binding of increasing concentrations of $[^3\text{H}]$ -17 β -estradiol under equilibrium conditions. A graph of specific $[^3\text{H}]$ -17 β -estradiol binding versus $[^3\text{H}]$ -17 β -estradiol concentration should reach a plateau for maximum specific binding indicative of saturation of the hrER α with the $[^3\text{H}]$ -17 β -estradiol. In addition, analysis of the data should document the binding of the $[^3\text{H}]$ -17 β -estradiol to a single, high-affinity binding site.

Although several saturation radioligand assays may need to be conducted before an optimal saturation curve, K_d , and B_{max} are achieved, a good starting point is to use a nominal 0.2 nM of active protein per assay well and the 40% rule as described above (section 9.3.4). The concentration of $[^3\text{H}]$ -17 β -estradiol should range from 0.313 to 4.0 nM in a total assay volume of 100 μL . Non-specific binding should be determined by adding a 2000-fold excess of unlabeled 17 β -estradiol. Non-specific, total, and specific binding should be displayed on a saturation binding curve. Further analysis of these data should use a non-linear regression analysis (e.g., BioSoft; McPherson, 1985; Motulsky, 1995) with a final display of the data as a Scatchard plot. The data analysis should determine B_{max} and K_d from the total binding data alone, using the assumption that non-specific binding is linear, unless justification is given for using a different method. In addition, robust regression should be used when determining the best fit unless justification is given. The method chosen for robust regression should be stated. Correction for ligand depletion (e.g., using the method of Swillens 1995) should always be used when determining B_{max} and K_d from saturation binding data.

An example of a saturation assay worksheet using increasing concentrations of radioligand is provided in [Appendix B](#). The worksheet shows how the microtiter plates could be organized for analysis. The analysis provided in the example is specific to the test conditions noted in the worksheet; **the user is responsible for modifying the worksheet appropriately** if, for example, a different concentration of protein is used, different concentrations of radioligand are tested, etc. An example of several runs entered into and analyzed by GraphPad Prism software for curve-fitting is also provided in the file “example saturation data.pzf”.

9.4.3 Performance Criteria for the Saturation Binding Assay

- The Saturation Binding Assay is functioning correctly if the following criteria have been met. If any of the criteria are not met, repeat the saturation binding assay with an appropriately adjusted concentration of hrER α .
- As increasing concentrations of [³H]-17 β -estradiol were used, did the specific binding curve reach a plateau (i.e., was maximum specific binding reached, indicating saturation of hrER α with ligand)?
- Is specific binding at 0.5 nM of [³H]-17 β -estradiol consistently 40% of the average measured total radioactivity added (acceptable range 30-50%) across runs? Occasional slight excursions outside of this range are acceptable, but if runs are consistently outside this range or a particular run is significantly outside this range, the protein concentration should be adjusted.
- Did the data produce a linear Scatchard plot? Non-linear plots generally indicate a problem with the assay such as ligand depletion [concave plot] or incorrect assessment of non-specific binding [convex plot].
- Is non-specific binding excessive? The value for non-specific binding should be less than 35% of the total binding.

9.5 Test Report

The test report must include, but is not limited to, the following information:

9.5.1 Radioactive Ligand ([³H]-17 β -Estradiol)

- Name, including number and position of tritium atom(s).
- Supplier, catalogue number, and batch number.
- Specific Activity (SA) and date for which that SA was certified by supplier.
- Concentration as received from supplier.
- Concentrations tested (nM).

9.5.2 Unlabeled 17 β -Estradiol

- Supplier, batch, and catalog number.
- CAS number.
- Purity.
- Concentrations added to NSB wells.

9.5.3 hrER α

- Type and source of hrER α , and supplier if from a commercial source.
- Method and conditions of transport and storage of hrER α , if applicable.

9.5.4 Test Conditions

- Composition of buffer(s) used.
- hrER α concentration used.

- Total volume per assay well.
- Incubation time and temperature.
- Notes on any abnormalities that occurred during any step of the assay including set-up, preparation, incubation or separation of bound and free [^3H]-17 β -estradiol.
- Notes on any problems in analysis of bound [^3H]-17 β -estradiol.
- Statistical methods used, if any.

9.5.5 Results

For each run, report at least the following. Be sure to include the run identifier on each product.

- Date of run.
- Graph of total, specific, and non-specific binding across the range of concentrations tested. Plot each data point (one per replicate) as well as the fitted curve (one per run for each of total, specific, and non-specific binding) on the same graph.
- Graph of measured concentrations in the total [^3H]-17 β -estradiol wells.
- Scatchard plot.
- Raw data (dpm) for each well.
- Estimated K_d
- Estimated $B_{\max}$

If more than one acceptable Saturation Binding Assay was run, also plot the data and curves from up to three runs on a single plot, being sure to distinguish runs (e.g., by color) and type of curve (total, specific, non-specific) (e.g., by line style).

9.5.6 Discussion

Address the items listed in [Section 9.4.2](#), Approach to Saturation Binding Assay Analysis.

9.5.7 Conclusion

Give the estimated K_d of the radioligand ([^3H]-17 β -estradiol) and the estimated $B_{\max}$ of the batch of hrER α used and briefly note any reasons why confidence in these numbers should be high or low.

CER1-hrER α Competitive Binding Assay: Working Protocol

10.0 CERI-hrER α Competitive Binding Assay: Working Protocol

The Competitive Binding Assay measures the binding of a single concentration of [^{3} H]-17 β -estradiol in the presence of increasing concentrations of a test compound. Three concurrent replicates are required at each concentration within one run. In addition, three non-concurrent runs are required for each chemical tested.

10.1 Summary of Events to Prepare for Competitive Binding Assay

The Day Before the Competitive Binding Assay:

- Prepare Assay Buffer.
- Perform calculations for radioisotope dilution.
- Perform calculations for estradiol dilutions, norethynodrel dilutions and test compound dilutions.
- Perform calculations for number of wells and microtiter plates in the run.
- Label microtiter plates.
- Label dilution plates for standard curve dilutions.
- Label dilution plates for the test compounds.
- Prepare 0.4% DCC suspension.
- Prepare the stock solutions of negative and positive controls.
- Prepare the stock solutions of test compounds.

The Morning of the Competitive Binding Assay:

- Prepare the [^{3} H]-17 β -estradiol dilutions for competitive binding.
- Prepare the dilutions for the negative (DBP) and positive controls (17 β -estradiol and norethynodrel) ([Figures 2](#) through [4](#)).
- Prepare the test compound dilutions.
- Prepare the hrER α solution in ice-cold assay buffer (**immediately prior to use**).

After Two-hour Assay Incubation

- Separate bound from free [^{3} H]-17 β -estradiol
- Dispense 1 mL scintillation cocktail per vial.
- Quantify [^{3} H]-17 β -estradiol bound to hrER α

Following the Competitive Binding Assay:

- Record raw data output from LSC into spreadsheet.
- Perform data analysis and determine if the runs meet performance criteria.
- If performance criteria are not met, determine potential areas for error and repeat experiment.

Table 4. Summary of Competitive Binding Assay Conditions

	<i>CERI Protocol</i>
Type of Receptor	hrER α
Concentration of [^{3} H]-17 β -estradiol	0.5 nM

Table 4. Summary of Competitive Binding Assay Conditions

		<i>CERI Protocol</i>
Concentration of hrER α		To be determined (see section 10.3.5). Frequently, a nominal concentration of 0.2 nM is appropriate.
Concentration of test compound (as serial dilutions)		100 pM to 1 mM*
Solvent (unless otherwise specified)		DMSO
Temperature		Room temperature
Incubation time		2 hours
DCC Concentration		DCC: 0.2% (as the final concentration after addition to the reaction wells)
Composition of assay buffer	Tris-HCl	10 mM (pH 7.4)
	EDTA·2Na·2H ₂ O	1 mM
	EGTA	1 mM
	Sodium Metavanadate (NaVO ₃)	1 mM
	Glycerol	10 %
	Leupeptin	0.2 mM
	Bovine Serum Albumin (BSA)	10 mg/mL
	DTT	1 mM

*Range and spacing of test compound concentrations may need to be adjusted depending on solubility.

10.2 Day Before Binding Assay

Perform the following steps before setting up the assay.

Note: Do not add the receptor protein to the assay buffer until the day of the assay just prior to setting up the assay.

10.2.1 Preparation of Assay Buffer

- Prepare assay buffer stock as described in [Section 6.0](#).
- Prepare assay buffer stock one day ahead of assay (See [Appendix A](#)). Be sure to adjust to pH 7.4, and store at 4°C (up to 4 weeks).

10.2.2 Preparation of 0.4% DCC Suspension

- DCC is used to separate the bound and free [³H]-17 β -estradiol. Prepare an adequate amount of DCC suspension for the number of microtiter plates in the next day's run.
- Add 200 mg of charcoal and 20 mg of dextran to 50 mL of assay buffer. This amount of suspension is enough for 4 microtiter plates.
- Cap the container and sonicate the tube for approximately 2 minutes to disrupt the clump of charcoal. This sonication step should not exceed 2 minutes. Rotate the container at 4°C overnight prior to use.

10.2.3 Preparation of Stock Standard: Unlabelled 17 β -Estradiol

- To prepare the unlabeled 17 β -estradiol stock solution (10 mM), dissolve 10.88 mg of 17 β -estradiol (MW = 272.4) in 4 mL DMSO.

Divide the stock solution and store the aliquots in amber vials at 4 °C up to 6 months until use. 17 β -estradiol aliquots can be prepared the day before the assay and stored for up to 6 months.

10.2.4 Preparation of Stock Weak Positive: Norethynodrel

- Prepare 100 mM of norethynodrel solution in DMSO (100% DMSO) and label this stock solution A. Accurately weigh out 14.92 mg of norethynodrel (MW = 298.4) into 0.5 mL of 100% DMSO. Mix well to ensure that the norethynodrel is fully dissolved. The concentration of this solution (solution A) is 100 mM. Store stock solution at 4 °C in the dark overnight.

10.2.5 Preparation of Stock Negative: Dibutyl Phthalate

- Prepare 100 mM of DBP solution in DMSO (labeled DBP A). Accurately weigh out 13.92 mg of DBP (MW = 278.34) into 0.5 mL of 100% DMSO. Mix well to ensure that the DBP is fully dissolved. The concentration of this solution (DBP A) is 100 mM. Store stock solution at 4 °C in the dark overnight.

10.2.6 Preparation of Stock Test Compounds

- To make the stock test compound concentration, calculate the grams of chemical needed to make a 100 mM stock. If the molecular weight of the test compound is X g/mole, then 1 M = X g/L, and 100 mM = (X/10) g/L = 0.X g/L. The volume can be adjusted to make a smaller amount of test compound. For example: if 100 mM = 0.X g/L, then 0.X/100 in 10 mL = 100 mM (or 0.00X g/ 10 mL is 100 mM). *Chemicals that specifically require prompt use of the compound prior to making stock should NOT be made up the day before the assay, but rather on the day of the assay.* If stock solutions are made, store at 4 °C in the dark overnight.

10.3 Day of the Assay

10.3.1 Preparation of Working Assay Buffer

- Take the necessary volume of assay buffer stock and split this into two volumes - one to be kept at RT, and one to be kept ice-cold.

10.3.2 Preparation of [³H]-17 β -Estradiol

- Note the specific activity of the purchased estradiol [2,4,6,7,16,17-³H]-solution, and calculate the dpm of 10 μ L of a 5 nM stock solution. Prepare dilutions of [³H]-17 β -estradiol. Measure triplicate 10 μ L samples of a 5 nM dilution by liquid scintillation counting (LSC). If the average of the actual counts is not within 6% of the counts calculated based on the specific activity of the purchased [³H]-17 β -estradiol, adjust the concentration appropriately. Dilution and calculation procedures are presented below.

Note: Always store stock [³H]-17β-estradiol solution at -20°C to prevent degradation of the tritiated hormone.

Store at -20°C in the original container.

Example calculation:

Manufacturers usually provide the specific activity and specific concentration of each batch or [³H]-17β-estradiol. The following information is an example of the information supplied by the manufacturer on the stock [³H]-17β-estradiol solution:

specific activity of 5.88 TBq/mmol and
37 MBq/mL toluene: ethanol (9:1 v/v).

- 1) Using the above information, the concentration of [³H]-17β-estradiol is calculated to be 6.29×10⁻⁶ M.

For example:

$$37 \text{ MBq/mL} \div 5.88 \text{ TBq/mmol} =$$

$$6.29 \text{ ((MBq} \times \text{mmol)} \div \text{(TBq} \times \text{mL))} (10^{-6} \text{ TBq/MBq)} = 6.29 \times 10^{-6} \text{ M}$$

- 2) Dilute concentrated [³H]-17β-estradiol solution with DMSO to prepare a 1 micromolar (μM) stock solution (called Stock A):

For example:

$$6.29 \times 10^{-6} \text{ M diluted to 1 mL of 1 } \mu\text{M } [^3\text{H}]\text{-17}\beta\text{-estradiol} =$$

$$6.29 \times 10^{-6} \text{ M (X)} = 1 \text{ mL (1 } \mu\text{M)}$$

$$\text{X} = 0.158 \text{ mL of } 6.29 \times 10^{-6} \text{ M } [^3\text{H}]\text{-17}\beta\text{-estradiol}$$

Dilute with 842 μL DMSO to yield a total volume of 1 mL at 1 μM (Stock A).

Dispense this stock solution in polypropylene micro tubes and store at -20°C as ready-for use for the further use. This can be stored for 3 months.

- 3) On the day of the assay, the 1 μM stock (Stock A) prepared above must then be further diluted to a 5 nM solution (Stock B) for use in the assay. For example, if one experiment will be done using three 96-well microtiter plates, and 10 μL of the 5 nM stock will be added per well (96 wells/microtiter plate × 10 μL/well × 2 microtiter plates + reserve = 3 mL), 3 mL are needed.

Note: The total volume of 3 mL suggested above is only an example. Appropriate volumes based on the number of chemicals being tested should be calculated prior to setting up the assay.

To prepare 3 mL of 5 nM [³H]-17β-estradiol (Stock B):

$$(1 \mu\text{M})(X \mu\text{L}) = (5 \text{ nM})(3,000 \mu\text{L}),$$

$$X = ((5 \text{ nM})(3,000 \mu\text{L})) \div (1 \mu\text{M})$$

$$X = ((0.005 \mu\text{M})(3,000 \mu\text{L})) \div (1 \mu\text{M})$$

$$X = 15 \mu\text{L of Stock A}$$

$$3000 \mu\text{L} - 15 \mu\text{L} = 2,985 \mu\text{L RT assay buffer}$$

Therefore, add 15 μL of Stock A (1 μM [³H]-17β-estradiol) to 2,985 μL of RT assay buffer and mix well to yield 3 mL Stock B (5 nM [³H]-17β-estradiol).

- 4) 10 μL of the 5 nM Stock B [³H]-17β-estradiol solution is needed per well. This corresponds to a final concentration of 0.05 pmol of [³H]-17β-estradiol per well.

$$0.05 \text{ pmol} = 0.294 \text{ kBq} = 17,640 \text{ dpm}$$

$$\{\text{where } 60 \text{ dpm} = 1 \text{ Bq},$$

$$\text{and } 0.05 \text{ pmol} \times 5.88 \text{ TBq/mmol} = 0.294 \text{ kBq}^*,$$

$$\text{so } 0.294 \text{ kBq} (1,000 \text{ Bq/kBq}) (60 \text{ dpm/Bq}) = 17,640 \text{ dpm}\}$$

***Note:** This amount depends on the actual specific activity of the [³H]-17β-estradiol lot being used.

In the Stock B solution, the concentration of DMSO is 0.5% and the final concentration of DMSO carried from this solution in the competitive reaction is 0.05%.

In triplicate, pipette 10 μL of Stock B to 1 mL scintillation cocktail and count the radioactivity for 2 minutes. Average the three values and compare the average to the nominal value as calculated above.

- 5) A deviation within 6% from the nominal values is considered acceptable. In case of a more pronounced deviation, adjust the concentration, either by adding a small amount of stock [³H]-17β-estradiol or adding assay buffer.
- 6) Measure in 3 vials, the radioactivity of the final dilution of [³H]-17β-estradiol used in the assay (if different from that in step 4). Record the dpm values in the data worksheet as the amount of [³H]-17β-estradiol used for each run.

10.3.3 Preparation of Unlabeled 17 β -Estradiol, Norethynodrel, DBP and Test Compounds

10.3.3.1 Description of Standard, Weak Positive, Negative and Solvent Controls

When testing substances for their ability to bind to hrER α , a concurrent solvent control, negative control, and standard and weak positive controls should be included in each experiment (i.e. one set of standards is needed on one microtiter plate of each run on a given day). The solvent control indicates that the solvent does not interact with the test system. The negative control, DBP, provides assurance that the assay as run, will detect when chemicals do not bind to the hrER α . Two positive controls, a weak positive and standard positive, are also included. A weak positive substance (norethynodrel) is included to demonstrate the sensitivity of each experiment and to allow an assessment of variability in the conduct of the assay across time. A standard curve, using the native ligand as a positive control (17 β -estradiol) is also included to allow for an assessment of variability in the conduct of the assay across time.

Figure 1 below demonstrates how competitive binding curves for chemicals with diverse binding affinities differ. The standard (E₂) and weak positive (Nor) that will be used for this protocol are included.

*Note: The data below were collected prior to setting the concentration limits for test chemicals in this protocol. Therefore, not all of the test chemicals below were tested to the recommended maximum concentration stated in this protocol. **Test chemicals should always be tested up to the maximum concentration recommended in this protocol (10⁻³ M) and any solubility limits should be recorded.***

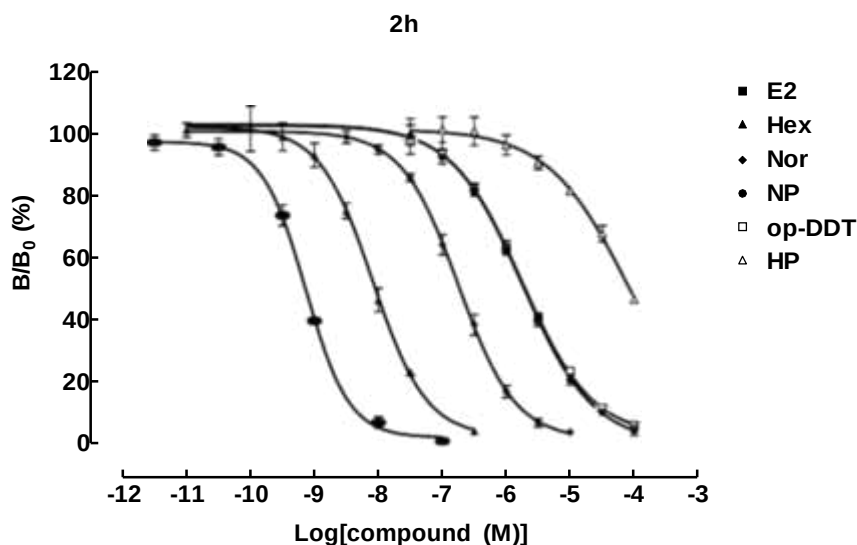


Figure 1. Competitive Binding Curves for 17 β -estradiol (E₂), hexestrol (hex), norethynodrel (Nor), nonylphenol mixture (NP), ortho,

para - dichloro-diphenyl-trichloroethane (*o,p'*-DDT), and 4-n-heptylphenol (HP).

10.3.3.2 Example of Preparation Procedures for Positive, Weak Positive, Negative, and Solvent Controls

The assay will be set up in one or more 96-well microtiter plates. Use a separate microtiter plate, called “dilution plate,” to make dilutions of reactants that will be added to the microtiter plate. Diluted reactants from the dilution plate will be transferred to the microtiter plate using a multi-channel pipettor. Table 5 shows an example layout of the dilution plate for positive, weak positive, negative, and solvent controls. Figures 2, 3, and 4 provide a guide for how to efficiently set up the dilution plate.

Table 5. Example Layout of Dilution Plate for Negative and Positive Controls Including Total Binding and Non-Specific Binding

	1	2	3	4	11	12
A	Dilution for 17 β -Estradiol	10 ⁻⁸ M	10 ⁻⁹ M			TB
B		Dilution for norethynodrel	10 ⁻⁷ M	10 ⁻⁸ M		NSB
C			10 ^{-6.5} M	10 ⁻⁷ M		
D			10 ⁻⁶ M	10 ⁻⁶ M		
E			10 ^{-5.5} M	10 ⁻⁵ M		
F			10 ⁻⁵ M	10 ⁻⁴ M		
G			10 ^{-4.5} M	10 ⁻³ M		
H			10 ^{-3.5} M	10 ⁻² M		

TB: Total binding (solvent control), BC: Buffer Control, NSB: Non-specific binding (10⁻⁵ M 17 β -E₂)

10.3.3.2.1 Example of Preparation Procedure for Unlabeled 17 β -Estradiol Standard Curve

Positive Control: Standard Curve

Prepare a standard curve using the positive control, unlabeled 17 β -estradiol for each hrER α competitive binding assay run. Final concentrations of unlabeled 17 β -estradiol in the assay wells to be used for the standard curve are: 10⁻⁷, 10⁻⁸, 10^{-8.5}, 10⁻⁹, 10^{-9.5}, 10⁻¹⁰, 10⁻¹¹ M (labeled TB) (plus the 10⁻⁶ concentration in the NSB well). Prepare serial dilutions of unlabeled 17 β -estradiol in assay buffer at 10-fold higher concentration than the desired concentrations to achieve the proper final concentrations when added to the reaction well. Steps to prepare unlabeled 17 β -estradiol are described below. Dilutions are prepared as in Figure 2.

- Using the 10 mM stock of unlabeled 17 β -estradiol prepared in [Section 10.2.3](#), prepare 1 mM of E₂ solution in 100% DMSO (1:10 dilution of 10 mM stock).

- Serially prepare 100 μM (A) and 10 μM (B) of E_2 solution in 100% DMSO.
- Dispense 90 μL of RT assay buffer in wells “H1”, “G1”, and “B1” of the microtiter plate. In “F1”, “E1”, “D1”, and “C1”, dispense 68.4 μL of RT assay buffer.
- Pipette 10 μL of 10 μM of E_2 solution (B) to “H1” to make 1 μM E_2 .
- To prepare a series of E_2 concentrations, conduct dilution as illustrated in Figure 2. For example follow the dilutions indicated with arrows on the sides of each well in figure 2 by adding 10 μL of “H1” to “G1” (1/10 dilution), and pipette well to mix. Next pipette 31.6 μL of “G1” to “F1” (3.16/10 dilution), pipette well to mix. Add 31.6 μL “F1” to “E1” (3.16/10 dilution), pipette well to mix. Add 31.6 μL of “E1” to “D1”, pipette well to mix. Add 31.6 μL of “D1” to “C1”, pipette well to mix, and finally add 10 μL of “C1” to “B1” and pipette well to mix.

TB and NSB

- Dispense 80 μL of RT assay buffer to “A12” and “B12” to determine the total binding (TB) as solvent control, and to calculate the non-specific binding (NSB) (see Figure 2 below).
- Add 20 μL of DMSO in “A12” to prepare 20% DMSO.
- Pipette 10 μL of the 100 μM of E_2 solution (A) and 10 μL of DMSO to “B12” to make 10 μM E_2 (20% DMSO) to calculate the NSB.

Note: TB wells will be used as the solvent control. Additional information of the solvent control can be referred to in section 10.3.3.2.4.

Buffer Control

- Dispense 100 μL of RT assay buffer to “A1” for the buffer control.

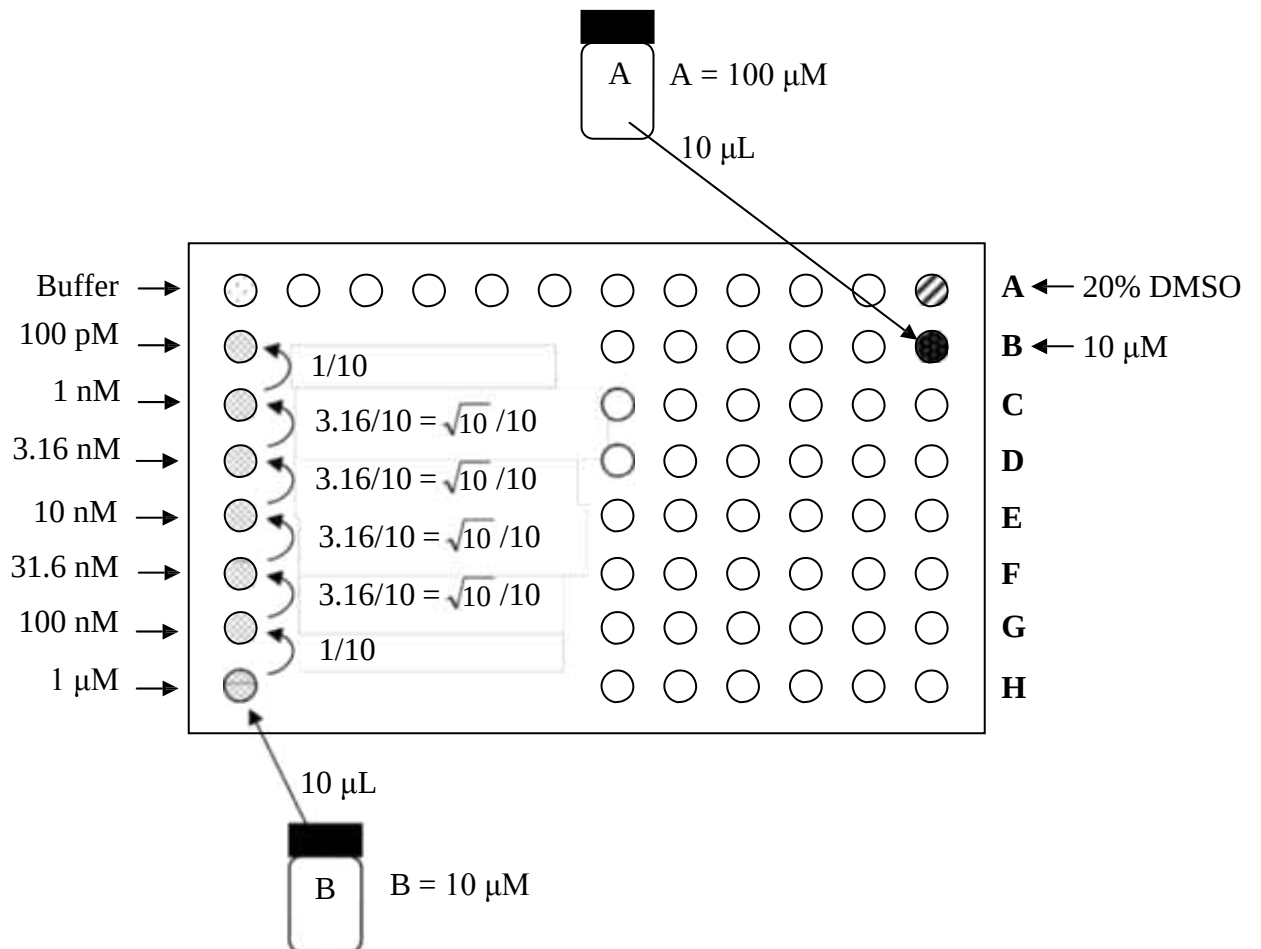
Note: The following cells are the source of material for use in the microtiter plate used for the binding reaction (see figure 2):

A1: **Buffer Control** (BC) of $[^3\text{H}]\text{E}_2$

A12: **Total Binding** (TB) of $[^3\text{H}]\text{E}_2$ as solvent control

B12: **Non-Specific Binding** (NSB) of $[^3\text{H}]\text{E}_2$

B1~H1: **Specific binding** of $[^3\text{H}]\text{E}_2$ in a series of E_2 concentrations



Note: the concentrations indicated on the sides of the plate indicate the final concentration in that well when the dilution plate is complete.

Figure 2. Format of Dilution Plate for Unlabeled 17β -Estradiol Standard Curve

10.3.3.2.2 Weak Positive Control: Norethynodrel

Weak Positive Control

The weak positive control substance is norethynodrel. Steps to prepare norethynodrel are described below. Dilutions are prepared as in Figure 3.

The required concentrations for norethynodrel include: $10^{-4.5}$, $10^{-5.5}$, 10^{-6} , $10^{-6.5}$, 10^{-7} , $10^{-7.5}$, 10^{-8} , 10^{-9} M.

- Use the 100 mM stock solution A of Norethynodrel prepared the day before the assay (described in [Section 10.2.4](#) above) to prepare the serial dilutions described.
- Pipette 10 μ L of the 100 mM norethynodrel solution into 90 μ L DMSO to make 10 mM norethynodrel.
-
- Further dilute with RT assay buffer in vial B to make 1 mM norethynodrel (1:10 dilution of 10 mM, 10% DMSO).
- Dispense 68.4 μ L of assay buffer into each well in “column 2” of the dilution microtiter plate except for “G2” and “A2”. In “G2” and “A2”, dispense 90 μ L of assay buffer (see Figure 3 below).
- Add 31.6 μ L of 1 mM norethynodrel into “H2” to prepare 316 μ M ($10^{-3.5}$ M) (3.16% DMSO).
- To prepare a series of norethynodrel concentrations, conduct dilutions as illustrated in Figure 3. (For example, add 10 μ L “H2” to “G2”, pipette well to mix. Next add 31.6 μ L “G2” to “F2” and pipette well to mix, repeat following dilution instructions through well “A2”. Please note that only 10 μ L of “B2” goes into “A2” since this is a 1:10 dilution).

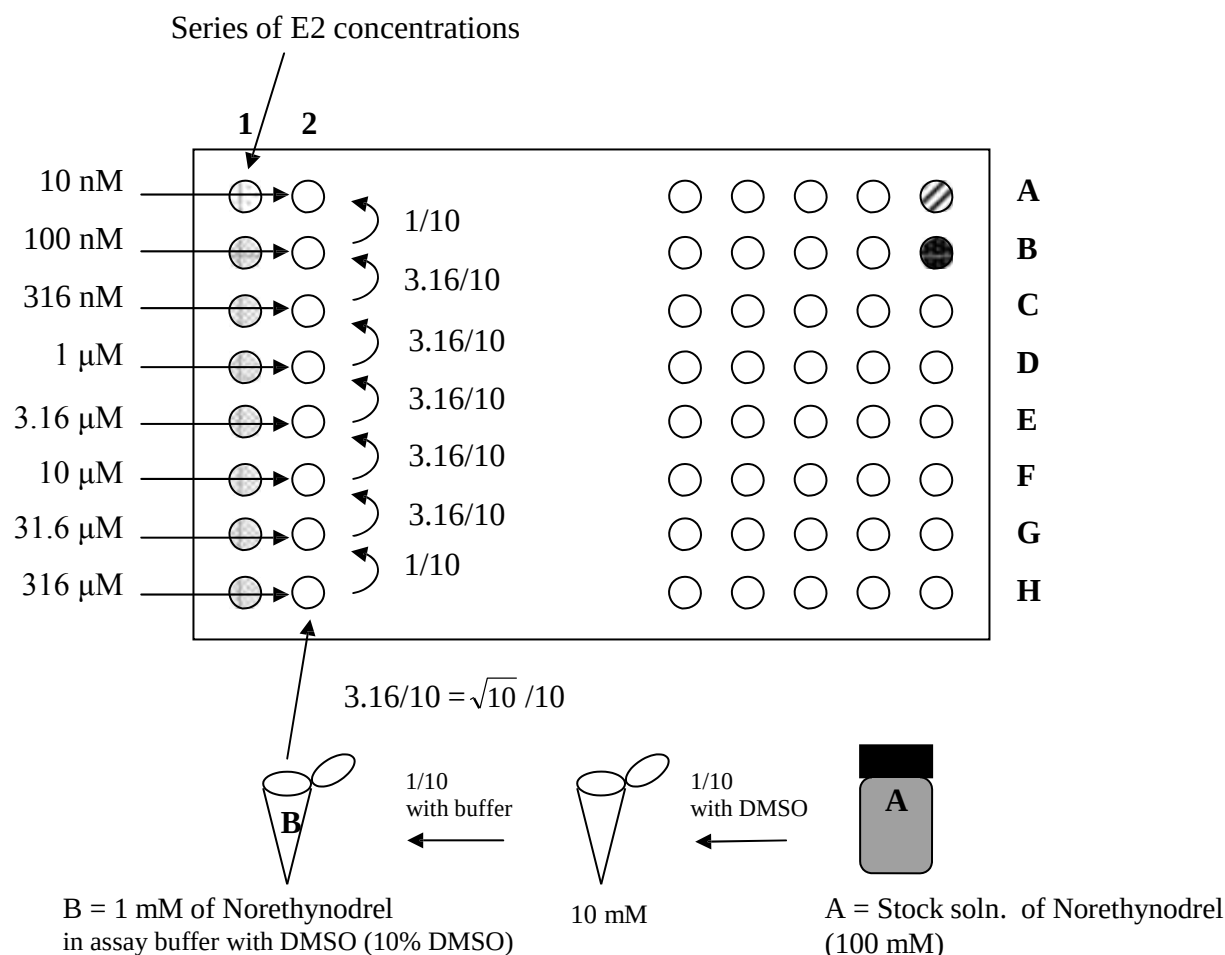


Figure 3. Set up of Dilution Plate for Norethynodrel

10.3.3.2.3 Negative Control: DBP

Negative Control

The negative control substance is DBP. The final concentration range to test for the negative control is from 10^{-11} to 10^{-4} M, in log increments. Steps to prepare DBP are described below. Dilutions are prepared as in Figure 4.

The required doses for DBP include: 10^{-4} , 10^{-5} , 10^{-6} , 10^{-7} , 10^{-8} , 10^{-9} , 10^{-10} M

- Use the 100 mM stock solution of DBP “A” prepared the day before the assay (see [Section 10.2.5](#)).
- Prepare a DMSO-assay buffer solution by mixing 160 μ L of RT assay buffer and 20 μ L of DMSO. Add 20 μ L of DBP “A” to create a final concentration of 10 mM DBP (labeled DBP “B”).

- Dispense 90 μL of RT assay buffer in each well in “column 3” of the microtiter plate except for “H3”, which is left blank (see Figure 4 below).
- In “G3”, dispense 10 μL of DBP “B” and mix well.
- Prepare a series of DBP concentrations. Add 10 μL from well G3 to F3 and pipette to mix well. Continue dilution as illustrated in Figure 4.

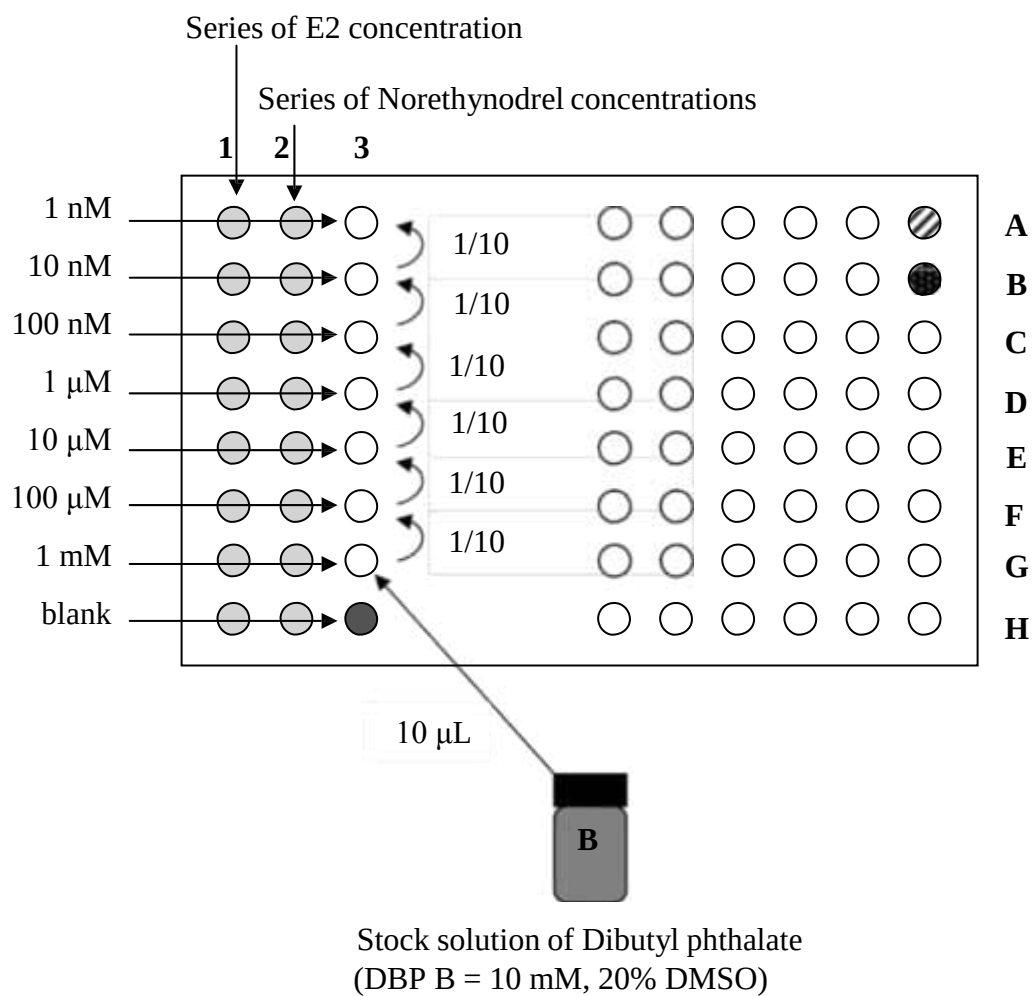


Figure 4. Set up of Dilution Plate for DBP

10.3.3.2.4 Selecting a Solvent

When choosing a solvent for test compounds, DMSO should always be the first choice followed, if necessary, by ethanol¹. If the test compound is known from previous information to be insoluble in DMSO at the level required for this assay, the reference for that information should be reported; the assay does not have to be run using DMSO. Ethanol is an alternate solvent. The solvent used (DMSO or ethanol) should be tested at the highest concentration that is added with the test compound. The maximum % of DMSO in any given assay well is 2.05%. If a solubility problem is encountered with a test compound, it is possible to increase the maximum % of DMSO up to 2.5%. These limits are placed on DMSO concentration because of known interference of higher solvent concentrations with the assay. For test compounds that are not soluble in DMSO, but are soluble in ethanol, a maximum of 2% ethanol may be used in the assay without interference, based on other hrER α binding assays.

- To demonstrate that the solvent used does not affect the assay system, the solvent control should be tested with each experiment (i.e. each day an assay is run).
- Only the highest concentration of solvent need be tested. The maximum concentration of DMSO in the final assay wells is 2.05% and shall not exceed 2.5%.
- To prepare the solvent control well (A12) in the dilution plate, add 80 μ L of RT assay buffer and 20 μ L of 100% DMSO, and pipette well to mix to prepare 20% DMSO.

10.3.3.3 Preparation of Test Compound Dilutions

Test Compound

The final concentration range to test for the test compound is from 1×10^{-10} to 1×10^{-3} M, in log increments. Determine if DMSO or ethanol is the appropriate solvent for the test compound. Stock solutions of the negative control (DBP), control and two positive controls (norethynodrel and unlabeled 17 β -estradiol) need to be dissolved in the same solvent used for the test compound.

10.3.3.3.1 Overview of Test Compound Preparation

Test compounds should be tested using log dose spaced curves with 8 concentrations ranging from 10^{-10} to 10^{-3} M, unless justification for alternate dose spacing is made. Prepare each in

¹ Note that the solvent used for a test compound must also be used for the reference chemical (inert 17 β -estradiol) and the control chemicals (norethynodrel and DBP) for that particular run. That is, if the test compound is run in DMSO, the reference chemical and controls must be run in DMSO; if the test compound is run in ethanol, the reference chemical and controls must also be run in ethanol. The examples in this section assume that the solvent being used is DMSO.

DMSO or ethanol, as appropriate, to yield the final concentrations as indicated below. Visually inspect the test compound (use a light box if available) to confirm that it is in solution prior to making the dilutions. It may be necessary to warm the stock solution of the test compound for 10 – 15 minutes in a 36° C water bath before making the dilutions. Make sure that the test compound is amenable to warmth and light (i.e., it does not degrade under these conditions) before preparing the stock solution and serial dilutions using the techniques described above. In addition, it is important that solutions be closely watched when added to the assay well as the test compound may precipitate upon addition to the assay well.

Note: *For the purpose of screening, an upper limit of 1 mM and a range from 1 mM to 100 pM, in ten-fold increments is acceptable. If the highest concentration cannot be prepared in either DMSO or ethanol (e.g., because there is precipitate in the stock solution, and adding more solvent would cause the solvent concentration in the final tube to be greater than the acceptable limit), that concentration may be omitted as long as the justification is included in the report. Other concentrations in the series should remain unchanged (viz., log-spaced on the powers of ten). If the highest concentration is omitted, an additional concentration may optionally be added at the low end of the concentration series. As few concentrations as possible should be omitted from the high-concentration end of the series. Omit only the concentrations at which a fully-solubilized stock solution cannot be obtained. Provide documentation in the report showing measures taken at each highest-concentration attempted to obtain full solubility, such as heating or using a different solvent.*

A test compound may be dissolved in the stock solution but may precipitate in the final assay well in the presence of the other reagents. Each assay well should therefore be inspected carefully. If precipitate is noted, continue with the assay. However, be sure to exclude the data for all wells that contain precipitate from curve-fitting, and note the reason for exclusion of the data.

Finally, it is possible that the test compound is not fully soluble in the final assay well but that the precipitate was not detected by visual inspection. For compounds which interact with the receptor, this might result in a U-shaped binding curve. Guidance on how to recognize and deal with U-shaped curves is given in [Section 10.4.2](#).

If there is information from other sources suggesting where the log(IC₅₀) of the test compound might lie, it may be appropriate to space the dilutions more closely (but regularly) around the expected log(IC₅₀) concentration rather than to test concentrations

which are known to be extreme. That is, selection of concentrations to test may depart from the default stated above if appropriate justification is given and the information supporting the initial estimate of the log(IC₅₀) is included in the report. In any case, the results must show that enough points on either side of the log(IC₅₀) were included so that the full curve, including the “top” and “bottom”, is adequately characterized.

10.3.3.3.2 Test Compound Concentrations

- 1) Use the stock test compound solutions prepared the day before the assay in [Section 10.2.6](#) to make the dilutions described.
- 2) Once a stock concentration of test compound is made (for this example we use 100 mM, but this may change depending on the chemical used), follow the dilutions to make the serial dilutions of test compound for the assay with the same procedure for DBP ([Figure 4](#)).
- 3) The solvent used for the following dilutions shall follow the protocol in [Section 10.3.3.2.4](#) above, using DMSO as the preferred solvent. If the highest concentration is not soluble in DMSO, ethanol may be tried next. Only if neither of these solvents work may the highest concentration be reduced below the upper limit. Reminder: the concentration of DMSO in the final assay volume may not exceed 2.5 %. If ethanol must be used as the solvent for any given test compound, the concentration of ethanol in the final assay volume may not exceed 2% based on other hrER α binding assays.
- 4) If a particular test compound requires ethanol as the solvent, the assay must be performed using capped vials for the test compound and standard dilutions to avoid evaporation of ethanol, which will alter the chemical concentrations when making test compound dilutions and during incubation of the reaction wells in the assay.

10.3.4 Preparation of hrER α Solution

The hrER α solution should be prepared with ice-cold assay buffer just prior to use (i.e. the TB, NSB and hot ligand only wells are prepared by adding the buffer and [³H]-17 β -Estradiol with/without Unlabeled 17 β -Estradiol in the 96-well plate).

- 1) The final nominal receptor concentration is determined according to the 40% criterion described in section 9.3.4.

- 2) Dilute the functional recombinant hrER into 9 mL ice cold assay buffer, so that the final concentration per well is equivalent to “40% specific binding”. Frequently, a final nominal receptor concentration of 0.2 nM will comply with this condition.

Caution! Do not vortex! Avoid foaming! Only mix/stir gently in order to obtain a homogenous receptor solution.

- 3) Add 30 μ L of this receptor solution to the reaction well to obtain the nominal concentration that corresponds to “40% specific binding” in the assay well. The 9 mL receptor solution is sufficient for 2 mincrotiter plates (2x96 wells plus reserve). Use receptor solution immediately after preparation.
- 4) Be sure to record you dilution calculations for further analysis of any discrepancies in the data.

10.3.5 Conduct Competitive Binding Assay

10.3.5.1 Set up of Competitive Binding Assay

When the buffer, dilution plate and [^{3} H]- 17 β -Estradiol have been prepared, set up the microtiter plate as depicted in Table 6. Table 6 represents the wells on a microtiter plate. Lanes 1, 2, and 3 are used for the buffer control, (row A) and positive control (17 β -Estradiol) (rows B- H) Lanes 4,5,and 6 are used for the weak positive control (Norethynodrel) (rows A-H). Lanes 7, 8, and 9 are used for the negative control (DBP)(rows A-G). Lanes 10, 11, and 12 are used for the TB, or solvent control, (row A) and NSB (row B). Additional microtiter plates are used for test compounds.

Table 6. Sample Competitive Binding Assay Microtiter Plate Layout*+

	1	2	3	4	5	6	7	8	9	10	11	12
	Buffer Control and Positive Control (E₂)			Weak Positive (Norethynodrel)			Negative Control (DBP)			TB and NSB		
A	Buffer Control			1×10^{-9}			1×10^{-10}			TB (solvent control) (2.05% DMSO)		
B	E ₂ (1×10^{-11})			1×10^{-8}			1×10^{-9}			NSB (10^{-6} M E ₂)		
C	E ₂ (1×10^{-10})			$1 \times 10^{-7.5}$			1×10^{-8}					
D	E ₂ ($1 \times 10^{-9.5}$)			1×10^{-7}			1×10^{-7}					
E	E ₂ (1×10^{-9})			$1 \times 10^{-6.5}$			1×10^{-6}					
F	E ₂ ($1 \times 10^{-8.5}$)			1×10^{-6}			1×10^{-5}					
G	E ₂ (1×10^{-8})			$1 \times 10^{-5.5}$			1×10^{-4}					
H	E ₂ (1×10^{-7})			$1 \times 10^{-4.5}$			blank					

* Sample set up for the standards microtiter plate to be run with each experiment.

+ Note that this microtiter plate is made using the dilutions made in the dilution plate described for the standards in the previous sections.

Add the following to each well: (see Tables 6 and 7)

- Prepare as many 96-well microtiter plates as needed and label as “Microtiter Plate-1”, “Microtiter Plate-2”, etc.
- Pipette 50 μ L of RT assay buffer in each well of each of the “Microtiter Plates” using a multi-channel pipettor.
- From the dilution plate created above with stocks for solvent, 17 β -estradiol, norethynodrel, and DBP, TB, and NSB, pipette 10 μ L of each test compound solution by multi-channel pipette to each corresponding well, which is indicated in Table 6, containing 50 μ L of assay buffer, and mix briefly using the multi-channel pipettor.
- Pipette 10 μ L of 5 nM [³H]-17 β -estradiol (stock B) to each well of the microtiter plate using the multi-channel pipette and mix briefly.
- Pipette 30 μ L of ice cold receptor solution to each well of the microtiter plate using a multi-channel pipette and mix well.

Note: For preparation of receptor solution, use ice-cold buffer. For the preparation of test compound and radioligand solution, use buffer at RT.

- Required additions are summarized in Table 7.

Table 7. Additions Required for Preparation of Competitive Binding Assay Microtiter Plate

Volume (μL)	Constituent
50	Room Temperature Assay Buffer
10	Unlabeled 17β -estradiol, norethynodrel, negative control, solvent, or test compounds, TB and NSB
10	$[^3\text{H}]$ - 17β -estradiol to yield final concentration of 0.5 nM
30	hrER α concentration as determined (see section 10.3.4)
100	Total volume in each assay well

Note: It would be also acceptable to prepare a master mixture of assay buffer + $[^3\text{H}]$ - 17β -estradiol to yield final concentration of 0.5 nM and dispense 60 μL of the master mixture **before** adding unlabeled 17β -estradiol or test compounds. The hrER α solution should be the last reagent to be added.

10.3.5.2 Incubate Competitive Binding Microtiter Plate

- Place the lid on the microtiter plate and incubate at RT (22 to 28°C) for two hours.

10.3.5.3 Separation of $[^3\text{H}]$ - 17β -Estradiol Bound to hrER α from Free $[^3\text{H}]$ - 17β -Estradiol

Note: To minimize dissociation of bound $[^3\text{H}]$ - 17β -estradiol from the hrER α during this process, it is extremely important that the DCC suspension and microtiter assay plates be kept ice-cold and that each step be conducted quickly but gently.

Note: To avoid the sedimentation of charcoal in the stock container, be sure to re-suspend the DCC mixture using the multi-channel pipettor prior to the addition of DCC to each well.

- Add 100 μL of ice cold DCC suspension (prepared the day before the assay) to each well and mix well using a multi-channel pipettor.
- Immediately place the microtiter plates on ice for 10 minutes.
- Transfer a 150 μL aliquot of the reaction mixture and DCC suspension from the microtiter plate to a microtiter plate filter (it is not necessary to re-suspend the DCC).
- Filter to remove DCC.
- Keep filtrates.

Note: If a microtiter plate filter is not available, this step can be replaced by centrifugation with the following protocol modifications.

- After centrifugation, remove 50 μ L of the supernatant for measurement by LSC. Using a smaller volume (50 μ L) prevents disruption of the DCC pellet and contamination of the supernatant volume used for scintillation counting.

10.3.5.4 Quantification of [^{3} H]-17 β -Estradiol Bound to hrER α

- Dispense 1 mL of scintillation cocktail into 6 mL LSC vials.
- Pipette a 100 μ L aliquot of the filtrate (or 50 μ L supernatant if centrifugation was used in place of a microtiter plate filter) from step 10.3.6.3 into scintillation cocktail. Cap and shake vials well.
- Place vials in LSC for determination of dpms/vial with quench correction. Count radioactivity for 2 minutes per vial.

Note: An LSC for microplates can be used in this step if available. The volume of filtrate counted may need to be adjusted to 50 μ L. If so, be sure to account for this change in the data spreadsheet. Also, be sure to use microtiter plates that are compatible with the scintillation fluid – some microtiter plates corrode in the presence of scintillation cocktail, altering the results of the assay.

10.4 Data Analysis

10.4.1 Terminology

- **Total [^{3} H]-17 β -estradiol:** Radioactivity in dpms added to each assay well. (Dpms in the defined volume of the well can be converted to concentration of [^{3} H]-17 β -estradiol.)
- **Total (Maximum) Binding (TB):** Radioactivity in dpms of the zero (solvent control) standard wells (i.e., the mean of the radioactivity in dpms in the “A1”-“A3” wells in [Figure 2](#)).
- **Nonspecific Binding (NSB):** Radioactivity in dpms in the wells that contain 2,000-fold excess of unlabeled over labeled 17 β -estradiol i.e., the “B10”-“B12” wells = 1 μ M cold 17 β -estradiol and 0.5 nM hot 17 β -estradiol).
- **Specific Binding:** Radioactivity in dpms for each concentration of standard or test compound minus the mean dpm of the NSB wells (i.e., total binding minus non-specific binding).

10.4.2 Approach to Competitive Binding Assay Analysis

The CERI protocol is optimized to the competitive assay’s ability to detect chemicals with the potential to interact with the ligand binding domain of the

hrER α manufactured by CERI. This assay, once validated, can be used as a screen or can be further developed for use in modeling activities. The Organisation for Economic Co-operation and Development (OECD) member groups involved in this validation have different needs for this assay. For example, the US EPA's Endocrine Disruptor Screening Program (EDSP) intends to use the hrER α competitive binding assay only to evaluate the potential of a test compound to interact with the endocrine system. The EDSP is less concerned with proving that the interaction is, specifically, one-site competitive binding, or with accurately characterizing the strength of the binding. Nevertheless, a certain amount of quantitative analysis is necessary to ensure that the assay has been run correctly, and to aid in classifying a test compound as positive for binding, negative, or equivocal.

Other OECD member groups can develop this assay for other purposes. For example, for the pre-screening of hormonal activity of chemicals and the study of the structural requirements of both chemical and receptor structures for their interactions (i.e. SAR research). The Japanese group at CERI, one of the OECD member groups involved in this validation, has described this type of work (Akahori Y. et al., 2005).

The following paragraphs describe issues to consider when using this assay to screen compounds for their potential to interact with the endocrine system.

Note: *To screen compounds for their potential to interact with the endocrine system, it is not necessary to clearly identify the interactions as one-site competitive binding (which could require additional saturation binding assays). The classification of a substance as positive or negative for binding for screening purposes might not be appropriate to use for structure-activity relationship analyses or other analyses where stringent classification as a one-site competitive binder may be necessary. Similarly, the "Relative Binding Affinities" estimated by this assay may not be appropriate for such structure-activity relationship analyses because the nature of the interaction has not been fully characterized.*

An hrER α competitive binding assay measures the binding of a single concentration of [^{3} H]-17 β -estradiol in the presence of increasing concentrations of a test compound. The competitive binding curve is plotted as specific [^{3} H]-17 β -estradiol binding versus the concentration (log₁₀ units) of the competitor. The concentration of the test compound that inhibits 50% of the maximum specific [^{3} H]-17 β -estradiol binding is the IC₅₀ value.

Estimates of log(IC₅₀) values should be determined using appropriate nonlinear curve fitting software to fit a one site competitive binding model (e.g., BioSoft; McPherson, 1985; Motulsky, 1995). The top, bottom, slope, and log(IC₅₀) should be unconstrained when fitting the curve. Robust regression should be used when determining the best fit unless justification is given. The method chosen for robust regression should be stated. Correction for ligand depletion should not be used. The relative binding affinity (RBA) should be calculated comparing the log(IC₅₀) of 17 β -estradiol with that of the test compound.

In order to ensure that the assay will provide reliable results, limits on the variability of the data points at each concentration within a run for the reference chemical and for the positive and negative controls can be set at a later time when more data are available. Instructions on how to calculate the within-run standard deviation of data points is given in the file “lab \$ run # chem @ YYMMDD SDw.xls”.

There may be cases where the raw data points describe an obviously U-shaped curve but the fitted curve, which is based on the Hill equation and does not accommodate U-shapes, masks this shape. This might happen, for example, if there is precipitation of the test compound at high concentrations that was not noticed during preparation of the tubes. In these cases, it is appropriate to suppress the data points in the right-hand leg of the ‘U’ in order to fit the curve. Exclude all replicates at any concentration where the mean for the replicates displays 10% more radioligand binding (that is, 10% less radioligand displacement) than the lowest mean at a lower concentration. For example, if the lowest mean [³H]-17β-estradiol binding at any concentration in the range 10⁻¹⁰ to 10⁻⁵ M is 15% and the mean at 10⁻⁴ M shows [³H]-17β-estradiol binding of 30%, all replicates at 10⁻⁴ M should be excluded from curve-fitting.

10.4.3 Performance criteria for the Competitive Binding Assay

The Competitive Binding Assay is functioning correctly if all of the following criteria have been met. The criteria apply to each individual run. If a run does not meet all of the performance criteria, the run must be repeated. Results for test compounds in disqualified runs are not used in classifying the hrERα binding potential of those chemicals.

- *Increasing concentrations of unlabeled 17β-estradiol displace [³H]-17β-estradiol from the receptor in a manner consistent with one-site competitive binding.* Specifically, the curve fitted to the unlabeled 17β-estradiol data points using non-linear regression descends from 90 – 10% over approximately an 81-fold increase in the concentration of the test compound (i.e., this portion of the curve will cover approximately 2 log units and the slope of the curve shall be close to -1). A binding curve that drops dramatically (e.g., has a slope steeper than -1) over one order of magnitude should be questioned, as should one that is U-shaped (i.e., percent bound is decreasing with increasing concentration of competitor but then begins to increase again). In both cases, something has happened to the dynamics of the binding assay and the reaction is no longer following the law of mass action (e.g., the test compound may be binding to multiple binding sites, the test compound may not be soluble at higher concentrations in the assay buffer, or the test compound is changing the pH of the reaction mixture). When the assay is correctly performed, unlabeled 17β-estradiol exhibits typical one-site competitive binding behavior.

In some instances, certain chemicals reach their solubility limits before maximal binding can take place, or unknown events interfere with receptor binding (i.e., compound binds to the assay walls or other sites on the receptor). In these cases, it may be clear that binding takes place, but it is not possible to achieve 100% displacement. In such cases, the data should be questioned, and if no technical error in assay implementation identified and the results repeatable, then the curves shall be considered under the classification criteria listed in the next section.

- *The IC₅₀ value for 17 β -estradiol is approximately equal to the molar concentration of [³H]-17 β -estradiol plus the K_d determined from the saturation binding assay. The K_d determined from the competitive binding assay is less reliable and should not be used here.*
- *Is total specific binding consistently 40% of the average measured total radioactivity added (acceptable range 30% to 50%) across runs? Occasional slight excursions outside of this range are acceptable, but if runs are consistently outside this range or a particular run is significantly outside this range, the protein concentration should be adjusted.*
- *The solvent control substance does not alter the sensitivity or reliability of the assay. The results of the solvent control (TB wells) are compared to the buffer control to verify that the solvent used does not affect the assay system. The results of the TB and buffer control should be comparable if there is no effect of the solvent on the assay.*
- *The negative control substance (DBP) does not displace more than 25% of the [³H]-17 β -estradiol from the hrER α at any concentration.*

10.4.4 Classification Criteria for Test Compound hrER α Binding

Classification of a test compound is based on the results of three non-concurrent runs, each of which meet the performance criteria. Until further guidance is available, laboratories may average the log(IC₅₀) values obtained from the three runs to determine the appropriate classification.

A substance is classified as “**positive**” for binding to the hrER α if a log(IC₅₀) value can be obtained from an unconstrained curve fitted to the Hill equation that has a slope of approximately -1.0. There must be at least one data point at which 50% or more of the radioligand has been displaced; the log(IC₅₀) may not be extrapolated from data which show less than 50% displacement, even if an appropriate Hill curve can be fitted.

Due to solubility constraints (for example), some test compounds might induce a significant reduction in binding of the radioligand to the hrER α but without reducing it below 50%. Until additional information becomes available about the significance of this category of dose response curves, substances with acceptable

binding curves which reach 25% displacement but not 50% at the highest concentration with acceptable data should be classified as “**equivocal**”².

Test compounds whose fitted curves have slopes that are unusually steep or unusually shallow should also be classified as “**equivocal**”. Justification for classifying a chemical on this basis should cite the Hill slope obtained.

Substances for which acceptable binding curves can be fit, and which do not displace more than 25% of the radioligand from the receptor, are classified as “**negative**”.

Substances for which no binding curve can be fit and for which no data point at any concentration displaces more than 25% of the radioligand are also classified as “**negative**”.

10.5 Test Report

The test report must include, but is not limited to, the following information:

10.5.1 Test Compound(s)

- Name, chemical structure, and CAS RN (Chemical Abstract Service Registry Number, CAS#), if known
- Physical nature (solid or liquid), and purity, if known
- Physicochemical properties relevant to the study (e.g., solubility, stability, volatility)

10.5.2 Solvent

- Justification for choice of solvent/vehicle if other than DMSO.
- Maximum concentration of solvent in assay wells. (Show calculations.)
- Information to demonstrate that the solvent/vehicle, if other than an established solvent, does not bind to, or otherwise affect, the hrER α .

10.5.3 [³H]-17 β -Estradiol

- Name, including number and position of tritium atom(s)
- Supplier, catalogue number, and batch number
- Specific Activity (SA) and date for which that SA was certified by supplier
- Concentration as received from supplier (Ci/mmol)
- Concentrations tested (nM)
- Calculations made to obtain the appropriate concentrations.

² In these cases, an additional K_i experiment may be useful to determine if the test compound is truly a competitive inhibitor. An experimentally derived K_i requires adding increasing concentrations of radiolabeled ligand in the presence of fixed concentrations of test compound and then plotting the data on a double reciprocal plot (Laws et al., 1996; Kelce et al, 1995; Segel, 1993). A pattern of lines that intersects on the ordinate axis is characteristic of competitive inhibition. Slopes obtained from each of the double reciprocal plots are then re-plotted as a function of the inhibitor concentration. The slope and intercept of the re-plot can be used to calculate a K_i value for the test compound (Segel, 1993).

10.5.4 Unlabeled 17 β -estradiol

- Supplier, batch, and catalog number
- CAS number
- Purity

10.5.5 hrER α

- Type and source of hrER α . If from a commercial source, the supplier must be identified. The protocol was optimized for the hrER α developed by CERI.
- Method and conditions of transport and storage of hrER α .

10.5.6 Test Conditions

- K_d of the unlabeled 17 β -estradiol reference estrogen. Report the K_d obtained from the Saturation Binding Assay for each batch of hrER α used, as well as the K_d s obtained from curve-fitting the Competitive Binding Assays of unlabeled 17 β -estradiol for each run.
- Concentration range of the unlabeled 17 β -estradiol tested.
- Composition of buffer(s) used.
- Concentration range and spacing of test compound, with justification if deviating from required range and spacing.
- Volume of vehicle used to dissolve test compound and volume of test compound added.
- Total volume per assay well.
- Incubation time and temperature.
- Concentration range and spacing of positive, negative, and solvent/vehicle controls.
- Notes on any precipitation of test compound while making stock solutions or while adding test dilutions to the assay wells.
- Notes on any abnormalities during separation of free [^{3} H]-17 β -estradiol.
- Notes on any problems in analysis of bound [^{3} H]-17 β -estradiol.
- Notes on reasons for repeating a run, if a repeat was necessary.
- Methods used to determine K_i and IC₅₀ values (software used, formulas, etc.).
- Statistical methods used, if any.

10.5.7 Results

Report the following for each run. Be sure to include the run number on each product.

- Date of run.
- Results (viz., the dpm counts for each well), inserted into the data worksheet provided in [Appendix D](#) (or similar), adjusted as necessary to accommodate the actual concentrations, volumes, etc. used in the assay. There should be one worksheet per run.
- Extent of precipitation of test compound (i.e. in stock solution, assay well, or not visible by eye).
- The solvent control response compared to the negative control.
- % Binding data for each replicate at each dose level for all substances.

- Plot of each data point, along with the unconstrained curve fitted to the Hill equation, which demonstrates the performance of the test compound in repeat runs. The data points and curves for the reference chemical, weak positive control, and negative control from that test compound's run should also be plotted on the same graph as the test compound. Data and curves shall be differentiated by run (i.e., the reference chemical, positive control, negative control, and test compound data points and fitted curve from Run A should be differentiated from those of Run B and Run C, and Run B should be differentiated from Run C).
- K_i (calculated from the Cheng-Prusoff equation, Cheng et al., 1973) and $\log(\text{IC}_{50})$ values and confidence limits for 17β -estradiol, the positive control, and the test compound.
- Calculated Relative Binding Affinity values for the positive control and the test compound determined from the same run, relative to RBA of 17β -estradiol = 1. Report both the $\log(\text{RBA})$ and the RBA.
- A record of all protocol deviations or problems encountered shall be kept and included in the final report. This record should also be used to improve runs that follow.

10.5.8 Discussion

- K_d and $\log(\text{IC}_{50})$ values for reference ligand, including ranges, means, and standard deviations.
- Reproducibility of the K_d and $\log(\text{IC}_{50})$ values of the reference ligand.
- Positive control data with ranges, means, and standard deviations.
- Compare the estimated IC_{50} values for 17β -estradiol to the value expected from the formula $\text{IC}_{50} = [\text{radioligand}] + K_d$.

10.5.9 Conclusion

- Classification of test compound with regard to in vitro hrER α -binding activity: positive, equivocal, or negative.
- If the test compound is positive, **report the range and average RBAs** obtained across the acceptable runs.

10.5.10 Replicate Studies

Generally, replicate studies are not mandated for screening assays. However, in situations where questionable data are obtained (i.e., the IC_{50} value is not well defined), replicate tests to clarify the results of the primary test would be prudent.

11.0 References

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Appendix A:

Buffer Preparation Worksheet

Buffers to prepare prior to the day of the assay:

Assay Buffer (10 mM Tris, 1mM EDTA·2Na·2H₂O, 1 mM EGTA, 1 mM NaVO₃, 10% Glycerol, 0.2 mM Leupeptin, 10 mg/mL BSA, 1 mM DTT)

	Compound	Grams/mL	Comments	Added?
1	Ultrapure water	800 mL	Dissolve the following in this water	
2	Tris	1.21 g		
3	EDTA·2Na	372 mg		
4	EGTA	380 mg		
5	NaVO ₃	121 mg		
6	Glycerol	100 mL		
7	BSA	10 g		
8	Leupeptin	98.7 mg		
9	DTT	154 mg		
10			Dissolve 2-10 in 800 mL H ₂ O	
11			Adjust to pH 7.4	
12			Bring final volume to 1000 mL and store at 4°C.	

Appendix B:
Typical [³H]-17β-Estradiol Saturation Assay with Three Replicate Wells

Typical [³ H]-17β-Estradiol Saturation Assay with Three Replicate Wells											
Position	Replicate	Well Type Code	Hot E2 Initial Concentration (nM)	Hot E2 Volume (uL)	Hot E2 Final Concentration (nM)	Cold E2 Initial Concentration (uM)	Cold E2 Volume (uL)	Cold E2 Final Concentration (uM)	Buffer Volume (uL)	Receptor Volume (uL)	Total volume in wells
A1	1	H	0.313	10	0.0313	—	—	—	60	30	100
A2	2	H	0.313	10	0.0313	—	—	—	60	30	100
A3	3	H	0.313	10	0.0313	—	—	—	60	30	100
B1	1	H	0.625	10	0.0625	—	—	—	60	30	100
B2	2	H	0.625	10	0.0625	—	—	—	60	30	100
B3	3	H	0.625	10	0.0625	—	—	—	60	30	100
C1	1	H	1.25	10	0.125	—	—	—	60	30	100
C2	2	H	1.25	10	0.125	—	—	—	60	30	100
C3	3	H	1.25	10	0.125	—	—	—	60	30	100
D1	1	H	2.50	10	0.25	—	—	—	60	30	100
D2	2	H	2.50	10	0.25	—	—	—	60	30	100
D3	3	H	2.50	10	0.25	—	—	—	60	30	100
E1	1	H	5.00	10	0.5	—	—	—	60	30	100
E2	2	H	5.00	10	0.5	—	—	—	60	30	100
E3	3	H	5.00	10	0.5	—	—	—	60	30	100
F1	1	H	10.0	10	1	—	—	—	60	30	100
F2	2	H	10.0	10	1	—	—	—	60	30	100
F3	3	H	10.0	10	1	—	—	—	60	30	100
G1	1	H	20	10	2	—	—	—	60	30	100
G2	2	H	20	10	2	—	—	—	60	30	100
G3	3	H	20	10	2	—	—	—	60	30	100
H1	1	H	40	10	4	—	—	—	60	30	100
H2	2	H	40	10	4	—	—	—	60	30	100
H3	3	H	40	10	4	—	—	—	60	30	100
A4	1	HC	0.313	10	0.0313	0.625	10	0.0625	50	30	100
A5	2	HC	0.313	10	0.0313	0.625	10	0.0625	50	30	100
A6	3	HC	0.313	10	0.0313	0.625	10	0.0625	50	30	100
B4	1	HC	0.625	10	0.0625	1.25	10	0.125	50	30	100
B5	2	HC	0.625	10	0.0625	1.25	10	0.125	50	30	100
B6	3	HC	0.625	10	0.0625	1.25	10	0.125	50	30	100
C4	1	HC	1.25	10	0.125	2.5	10	0.25	50	30	100
C5	2	HC	1.25	10	0.125	2.5	10	0.25	50	30	100
C6	3	HC	1.25	10	0.125	2.5	10	0.25	50	30	100
D4	1	HC	2.50	10	0.25	5	10	0.5	50	30	100
D5	2	HC	2.50	10	0.25	5	10	0.5	50	30	100
D6	3	HC	2.50	10	0.25	5	10	0.5	50	30	100

Typical [³ H]-17β-Estradiol Saturation Assay with Three Replicate Wells											
Position	Replicate	Well Type Code	Hot E2 Initial Concentration (nM)	Hot E2 Volume (uL)	Hot E2 Final Concentration (nM)	Cold E2 Initial Concentration (uM)	Cold E2 Volume (uL)	Cold E2 Final Concentration (uM)	Buffer Volume (uL)	Receptor Volume (uL)	Total volume in wells
E4	1	HC	5.00	10	0.5	10	10	1	50	30	100
E5	2	HC	5.00	10	0.5	10	10	1	50	30	100
E6	3	HC	5.00	10	0.5	10	10	1	50	30	100
F4	1	HC	10.0	10	1	20	10	2	50	30	100
F5	2	HC	10.0	10	1	20	10	2	50	30	100
F6	3	HC	10.0	10	1	20	10	2	50	30	100
G4	1	HC	20	10	2	40	10	4	50	30	100
G5	2	HC	20	10	2	40	10	4	50	30	100
G6	3	HC	20	10	2	40	10	4	50	30	100
H4	1	HC	40	10	4	80	10	8	50	30	100
H5	2	HC	40	10	4	80	10	8	50	30	100
H6	3	HC	40	10	4	80	10	8	50	30	100
A7	1	Hot	0.313	10	0.0313	—	—	—	90	—	100
A8	2	Hot	0.313	10	0.0313	—	—	—	90	—	100
A9	3	Hot	0.313	10	0.0313	—	—	—	90	—	100
B7	1	Hot	0.625	10	0.0625	—	—	—	90	—	100
B8	2	Hot	0.625	10	0.0625	—	—	—	90	—	100
B9	3	Hot	0.625	10	0.0625	—	—	—	90	—	100
C7	1	Hot	1.25	10	0.125	—	—	—	90	—	100
C8	2	Hot	1.25	10	0.125	—	—	—	90	—	100
C9	3	Hot	1.25	10	0.125	—	—	—	90	—	100
D7	1	Hot	2.50	10	0.25	—	—	—	90	—	100
D8	2	Hot	2.50	10	0.25	—	—	—	90	—	100
D9	3	Hot	2.50	10	0.25	—	—	—	90	—	100
E7	1	Hot	5.00	10	0.5	—	—	—	90	—	100
E8	2	Hot	5.00	10	0.5	—	—	—	90	—	100
E9	3	Hot	5.00	10	0.5	—	—	—	90	—	100
F7	1	Hot	10.0	10	1	—	—	—	90	—	100
F8	2	Hot	10.0	10	1	—	—	—	90	—	100
F9	3	Hot	10.0	10	1	—	—	—	90	—	100
G7	1	Hot	20	10	2	—	—	—	90	—	100
G8	2	Hot	20	10	2	—	—	—	90	—	100
G9	3	Hot	20	10	2	—	—	—	90	—	100
H7	1	Hot	40	10	4	—	—	—	90	—	100
H8	2	Hot	40	10	4	—	—	—	90	—	100
H9	3	Hot	40	10	4	—	—	—	90	—	100

Appendix C: Competitive Binding Assay Well Layout

Competitive Binding Assay Well Layout												
Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (uL)	Competitor Final Concentration (M)
S	A1	1	buffer control	BC	BC1	—	30	50	10	10	100	—
S	A2	2	buffer control	BC	BC2	—	30	50	10	10	100	—
S	A3	3	buffer control	BC	BC3	—	30	50	10	10	100	—
S	B1	1	cold E2	S	S1	1.00E-10	30	50	10	10	100	1.0E-11
S	B2	2	cold E2	S	S1	1.00E-10	30	50	10	10	100	1.0E-11
S	B3	3	cold E2	S	S1	1.00E-10	30	50	10	10	100	1.0E-11
S	C1	1	cold E2	S	S2	1.00E-09	30	50	10	10	100	1.0E-10
S	C2	2	cold E2	S	S2	1.00E-09	30	50	10	10	100	1.0E-10
S	C3	3	cold E2	S	S2	1.00E-09	30	50	10	10	100	1.0E-10
S	D1	1	cold E2	S	S3	3.16E-09	30	50	10	10	100	3.2E-10
S	D2	2	cold E2	S	S3	3.16E-09	30	50	10	10	100	3.2E-10
S	D3	3	cold E2	S	S3	3.16E-09	30	50	10	10	100	3.2E-10
S	E1	1	cold E2	S	S4	1.00E-08	30	50	10	10	100	1.0E-09
S	E2	2	cold E2	S	S4	1.00E-08	30	50	10	10	100	1.0E-09
S	E3	3	cold E2	S	S4	1.00E-08	30	50	10	10	100	1.0E-09
S	F1	1	cold E2	S	S5	3.16E-08	30	50	10	10	100	3.2E-09
S	F2	2	cold E2	S	S5	3.16E-08	30	50	10	10	100	3.2E-09
S	F3	3	cold E2	S	S5	3.16E-08	30	50	10	10	100	3.2E-09
S	G1	1	cold E2	S	S6	1.00E-07	30	50	10	10	100	1.0E-08
S	G2	2	cold E2	S	S6	1.00E-07	30	50	10	10	100	1.0E-08
S	G3	3	cold E2	S	S6	1.00E-07	30	50	10	10	100	1.0E-08
S	H1	1	cold E2	S	S7	1.00E-06	30	50	10	10	100	1.0E-07
S	H2	2	cold E2	S	S7	1.00E-06	30	50	10	10	100	1.0E-07
S	H3	3	cold E2	S	S7	1.00E-06	30	50	10	10	100	1.0E-07
S	A4	1	norethynodrel	NE	WP1	1.00E-08	30	50	10	10	100	1.0E-09
S	A5	2	norethynodrel	NE	WP1	1.00E-08	30	50	10	10	100	1.0E-09
S	A6	3	norethynodrel	NE	WP1	1.00E-08	30	50	10	10	100	1.0E-09
S	B4	1	norethynodrel	NE	WP2	1.00E-07	30	50	10	10	100	1.0E-08
S	B5	2	norethynodrel	NE	WP2	1.00E-07	30	50	10	10	100	1.0E-08
S	B6	3	norethynodrel	NE	WP2	1.00E-07	30	50	10	10	100	1.0E-08
S	C4	1	norethynodrel	NE	WP3	3.16E-07	30	50	10	10	100	3.2E-08
S	C5	2	norethynodrel	NE	WP3	3.16E-07	30	50	10	10	100	3.2E-08
S	C6	3	norethynodrel	NE	WP3	3.16E-07	30	50	10	10	100	3.2E-08
S	D4	1	norethynodrel	NE	WP4	1.00E-06	30	50	10	10	100	1.0E-07
S	D5	2	norethynodrel	NE	WP4	1.00E-06	30	50	10	10	100	1.0E-07
S	D6	3	norethynodrel	NE	WP4	1.00E-06	30	50	10	10	100	1.0E-07
S	E4	1	norethynodrel	NE	WP5	3.16E-06	30	50	10	10	100	3.2E-07
S	E5	2	norethynodrel	NE	WP5	3.16E-06	30	50	10	10	100	3.2E-07
S	E6	3	norethynodrel	NE	WP5	3.16E-06	30	50	10	10	100	3.2E-07
S	F4	1	norethynodrel	NE	WP6	1.00E-05	30	50	10	10	100	1.0E-06
S	F5	2	norethynodrel	NE	WP6	1.00E-05	30	50	10	10	100	1.0E-06
S	F6	3	norethynodrel	NE	WP6	1.00E-05	30	50	10	10	100	1.0E-06
S	G4	1	norethynodrel	NE	WP7	3.16E-05	30	50	10	10	100	3.2E-06
S	G5	2	norethynodrel	NE	WP7	3.16E-05	30	50	10	10	100	3.2E-06
S	G6	3	norethynodrel	NE	WP7	3.16E-05	30	50	10	10	100	3.2E-06

Competitive Binding Assay Well Layout

Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (uL)	Competitor Final Concentration (M)
S	H4	1	norethynodrel	NE	WP8	3.16E-04	30	50	10	10	100	3.2E-05
S	H5	2	norethynodrel	NE	WP8	3.16E-04	30	50	10	10	100	3.2E-05
S	H6	3	norethynodrel	NE	WP8	3.16E-04	30	50	10	10	100	3.2E-05
S	A7	1	DBP	N	DBP1	1.00E-09	30	50	10	10	100	1.0E-10
S	A8	2	DBP	N	DBP1	1.00E-09	30	50	10	10	100	1.0E-10
S	A9	3	DBP	N	DBP1	1.00E-09	30	50	10	10	100	1.0E-10
S	B7	1	DBP	N	DBP2	1.00E-08	30	50	10	10	100	1.0E-09
S	B8	2	DBP	N	DBP2	1.00E-08	30	50	10	10	100	1.0E-09
S	B9	3	DBP	N	DBP2	1.00E-08	30	50	10	10	100	1.0E-09
S	C7	1	DBP	N	DBP3	1.00E-07	30	50	10	10	100	1.0E-08
S	C8	2	DBP	N	DBP3	1.00E-07	30	50	10	10	100	1.0E-08
S	C9	3	DBP	N	DBP3	1.00E-07	30	50	10	10	100	1.0E-08
S	D7	1	DBP	N	DBP4	1.00E-06	30	50	10	10	100	1.0E-07
S	D8	2	DBP	N	DBP4	1.00E-06	30	50	10	10	100	1.0E-07
S	D9	3	DBP	N	DBP4	1.00E-06	30	50	10	10	100	1.0E-07
S	E7	1	DBP	N	DBP5	1.00E-05	30	50	10	10	100	1.0E-06
S	E8	2	DBP	N	DBP5	1.00E-05	30	50	10	10	100	1.0E-06
S	E9	3	DBP	N	DBP5	1.00E-05	30	50	10	10	100	1.0E-06
S	F7	1	DBP	N	DBP6	1.00E-04	30	50	10	10	100	1.0E-05
S	F8	2	DBP	N	DBP6	1.00E-04	30	50	10	10	100	1.0E-05
S	F9	3	DBP	N	DBP6	1.00E-04	30	50	10	10	100	1.0E-05
S	G7	1	DBP	N	DBP7	1.00E-03	30	50	10	10	100	1.0E-04
S	G8	2	DBP	N	DBP7	1.00E-03	30	50	10	10	100	1.0E-04
S	G9	3	DBP	N	DBP7	1.00E-03	30	50	10	10	100	1.0E-04
S	A10	1	total binding	TB	TB1	-	30	50	10	10	100	-
S	A11	2	total binding	TB	TB2	-	30	50	10	10	100	-
S	A12	3	total binding	TB	TB3	-	30	50	10	10	100	-
S	B10	1	cold E2 (high)	NSB	S0	1.00E-05	30	50	10	10	100	1.0E-06
S	B11	2	cold E2 (high)	NSB	S0	1.00E-05	30	50	10	10	100	1.0E-06
S	B12	3	cold E2 (high)	NSB	S0	1.00E-05	30	50	10	10	100	1.0E-06
P1	A1	1	Unknown 1	U1	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A2	2	Unknown 1	U1	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A3	3	Unknown 1	U1	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	B1	1	Unknown 1	U1	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B2	2	Unknown 1	U1	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B3	3	Unknown 1	U1	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	C1	1	Unknown 1	U1	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C2	2	Unknown 1	U1	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C3	3	Unknown 1	U1	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	D1	1	Unknown 1	U1	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D2	2	Unknown 1	U1	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D3	3	Unknown 1	U1	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	E1	1	Unknown 1	U1	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E2	2	Unknown 1	U1	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E3	3	Unknown 1	U1	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	F1	1	Unknown 1	U1	6	1.00E-04	30	50	10	10	100	1.0E-05

Competitive Binding Assay Well Layout												
Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (uL)	Competitor Final Concentration (M)
P1	F2	2	Unknown 1	U1	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	F3	3	Unknown 1	U1	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	G1	1	Unknown 1	U1	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G2	2	Unknown 1	U1	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G3	3	Unknown 1	U1	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	H1	1	Unknown 1	U1	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H2	2	Unknown 1	U1	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H3	3	Unknown 1	U1	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	A4	1	Unknown 2	U2	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A5	2	Unknown 2	U2	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A6	3	Unknown 2	U2	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	B4	1	Unknown 2	U2	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B5	2	Unknown 2	U2	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B6	3	Unknown 2	U2	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	C4	1	Unknown 2	U2	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C5	2	Unknown 2	U2	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C6	3	Unknown 2	U2	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	D4	1	Unknown 2	U2	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D5	2	Unknown 2	U2	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D6	3	Unknown 2	U2	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	E4	1	Unknown 2	U2	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E5	2	Unknown 2	U2	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E6	3	Unknown 2	U2	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	F4	1	Unknown 2	U2	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	F5	2	Unknown 2	U2	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	F6	3	Unknown 2	U2	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	G4	1	Unknown 2	U2	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G5	2	Unknown 2	U2	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G6	3	Unknown 2	U2	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	H4	1	Unknown 2	U2	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H5	2	Unknown 2	U2	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H6	3	Unknown 2	U2	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	A7	1	Unknown 3	U3	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A8	2	Unknown 3	U3	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A9	3	Unknown 3	U3	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	B7	1	Unknown 3	U3	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B8	2	Unknown 3	U3	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B9	3	Unknown 3	U3	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	C7	1	Unknown 3	U3	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C8	2	Unknown 3	U3	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C9	3	Unknown 3	U3	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	D7	1	Unknown 3	U3	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D8	2	Unknown 3	U3	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D9	3	Unknown 3	U3	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	E7	1	Unknown 3	U3	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E8	2	Unknown 3	U3	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E9	3	Unknown 3	U3	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	F7	1	Unknown 3	U3	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	F8	2	Unknown 3	U3	6	1.00E-04	30	50	10	10	100	1.0E-05

Competitive Binding Assay Well Layout												
Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (ul)	Competitor Final Concentration (M)
P1	F9	3	Unknown 3	U3	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	G7	1	Unknown 3	U3	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G8	2	Unknown 3	U3	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G9	3	Unknown 3	U3	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	H7	1	Unknown 3	U3	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H8	2	Unknown 3	U3	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H9	3	Unknown 3	U3	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	A10	1	Unknown 4	U4	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A11	2	Unknown 4	U4	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	A12	3	Unknown 4	U4	1	1.00E-09	30	50	10	10	100	1.0E-10
P1	B10	1	Unknown 4	U4	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B11	2	Unknown 4	U4	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	B12	3	Unknown 4	U4	2	1.00E-08	30	50	10	10	100	1.0E-09
P1	C10	1	Unknown 4	U4	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C11	2	Unknown 4	U4	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	C12	3	Unknown 4	U4	3	1.00E-07	30	50	10	10	100	1.0E-08
P1	D10	1	Unknown 4	U4	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D11	2	Unknown 4	U4	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	D12	3	Unknown 4	U4	4	1.00E-06	30	50	10	10	100	1.0E-07
P1	E10	1	Unknown 4	U4	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E11	2	Unknown 4	U4	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	E12	3	Unknown 4	U4	5	1.00E-05	30	50	10	10	100	1.0E-06
P1	F10	1	Unknown 4	U4	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	F11	2	Unknown 4	U4	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	F12	3	Unknown 4	U4	6	1.00E-04	30	50	10	10	100	1.0E-05
P1	G10	1	Unknown 4	U4	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G11	2	Unknown 4	U4	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	G12	3	Unknown 4	U4	7	1.00E-03	30	50	10	10	100	1.0E-04
P1	H10	1	Unknown 4	U4	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H11	2	Unknown 4	U4	8	1.00E-02	30	50	10	10	100	1.0E-03
P1	H12	3	Unknown 4	U4	8	1.00E-02	30	50	10	10	100	1.0E-03

**Freyberger-Wilson Assay Protocol for the *In Vitro* Estrogen
Receptor- α (ER α) Saturation and Competitive Binding
Assays Using Human Recombinant Full Length Estrogen
Receptor- α**

Table of Contents

	Page
1.0 Purpose of the Assay	6
2.0 Safety and Operating Precautions	7
3.0 Detailed Summary of the Assays	8
4.0 Terminology	9
5.0 Equipment and Materials	10
5.1 Equipment	10
5.2 Reagents	10
5.3 Supplies	11
5.4 Software	11
5.4.1 Nonlinear Curve-Fitting Software	11
5.4.2 Spreadsheet Software	11
6.0 Preparation of Buffer Solutions	12
6.1 Stock Solutions	12
6.1.1 10 X Stock (100 mM Tris-Buffer pH 7.5).....	12
6.2 Working Assay Buffer	12
6.2.1 hrER α Binding Assay Buffer pH 7.5.....	12
7.0 Demonstration of Acceptable hrER α Receptor Protein Performance	13
8.0 Demonstration of Acceptable Laboratory Performance	14
9.0 FWA Saturation Binding: Working Protocol	16
9.1 Summary of Saturation Binding Assay Steps	16
9.2 Preliminary Steps	17
9.2.1 Preparation of Assay Buffer	17
9.2.2 Preparation of [^{3} H]-17 β -Estradiol Stock Solution.....	17
9.2.3 Preparation of [^{3} H]-17 β -Estradiol Dilutions	18
9.2.4 Preparation of Unlabeled 17 β -Estradiol for Non-Specific Binding (NSB) Wells.....	19
9.2.5 Determination of Receptor (hrER α) Concentration	20
9.3 Preparation of Saturation Binding Assay Microtiter Plates	21
9.4 Completion of Saturation Binding Assay	22
9.4.1 Preparation of 5% DCC Suspension.....	22
9.4.2 Separation of [^{3} H]-17 β -Estradiol Bound to hrER α from Free [^{3} H]-17 β - Estradiol.....	22
9.4.3 Extraction and Quantification of [^{3} H]-17 β -Estradiol Bound to hrER α	23
9.5 Data Analysis	24
9.5.1 Terminology	24
9.5.2 Approach to Saturation Binding Assay Analysis	25
9.5.3 Performance Criteria for the Saturation Binding Assay	25

Table of Contents (Continued)

	Page
9.6 Test Report	26
9.6.1 [³ H]-17β-Estradiol	26
9.6.2 Unlabeled 17β-Estradiol	26
9.6.3 Estrogen Receptor (hrERα)	26
9.6.4 Test Conditions	26
9.6.5 Results	27
9.6.6 Discussion	27
9.6.7 Conclusion	27
10.0 FWA Competitive Binding: Working Protocol	29
10.1 Summary of Competitive Binding Assay Steps	29
10.2 Preliminary Steps	30
10.2.1 Preparation of Assay Buffer	30
10.2.2 Preparation of [³ H]-17β-Estradiol Stock Solution	30
10.2.3 Determination of Receptor (hrERα) Concentration	31
10.3 Preparation of Unlabeled Estradiol-17β, Controls, and Test Compounds	32
10.3.1 Description of Controls: Solvent, Buffer, Strong Positive (reference estrogen), Negative, and Weak Positive	32
10.3.2 Preparation of Test Compounds	40
10.4 Preparation of Competitive Binding Assay Microtiter Plates	44
10.4.1 Contents of Each Well	44
10.5 Completion of Competitive Binding Assay	45
10.5.1 Preparation of 5% DCC Suspension	45
10.5.2 Separation of [³ H]-17β-Estradiol Bound to hrERα from Free [³ H]-17β- Estradiol	45
10.5.3 Extraction and Quantification of [³ H]-17β-Estradiol Bound to hrERα	46
10.6 Data Analysis	47
10.6.1 Terminology	47
10.6.2 Approach to Competitive Binding Assay Analysis	47
10.6.3 Performance Criteria for the Competitive Binding Assay	49
10.6.4 Classification Criteria for Test compound hrERα Binding	50
10.7 Test report	51
10.7.1 Test compound(s)	51
10.7.2 Solvent	51
10.7.3 [³ H]-17β-Estradiol	51
10.7.4 Unlabeled 17β-Estradiol	51
10.7.5 hrERα	51
10.7.6 Test Conditions	51
10.7.7 Results	52
10.7.8 Discussion	52
10.7.9 Conclusion	53
10.7.10 Replicate Studies	53
11.0 References	54

Table of Contents (Continued)

	Page
Appendix A: Buffer Preparation Worksheet.....	55
Appendix B: Typical [³ H]-17β-Estradiol Saturation Assay with Three Replicate Wells.....	56
Appendix C: Competitive Binding Assay Well Layout	58

List of Tables

Table 1. List of Terms	9
Table 2. Components of Assay Buffer	12
Table 3. List of controls and proficiency chemicals for the hrER competitive binding assay.	15
Table 4. Summary of Saturation Binding Assay Conditions	18
Table 5. Preparation Procedure for [³ H]-17β-Estradiol Dilutions	20
Table 6. Preparation of Unlabeled 17β-Estradiol Dilutions in Ethanol	22
Table 7. Preparation Procedure for Unlabeled 17β-Estradiol Dilutions	22
Table 8. Sample Saturation Binding Assay Microtiter Plate Layout	24
Table 9. Sample Saturation Binding Assay Microtiter Plate Layout, Radioactivity Measurement	25
Table 10. Summary Table of Competitive Binding Assay Conditions.....	32
Table 11. Preparation of Non-labeled 17β-Estradiol Dilutions in Ethanol.....	37
Table 12. Concentrations of Unlabeled 17b-Estradiol Standard Curve	38
Table 13. Preparation of Norethynodrel Dilutions in Ethanol	39
Table 14. Concentrations of Norethynodrel Dilutions	40
Table 15. Concentrations for DBP Dilutions.....	42
Table 17. Concentrations of Test Chemicals	43
Table 18. Sample Competitive Binding Assay Microtiter Plate Layout	44
Table 19. Volume of Assay Components for hrER Competitive Binding Assay, Microtiter Plates.....	45
Table 20. Sample Competitive Binding Assay Microtiter Plate Layout, Radioactivity Measurement	46
Table 21. FW hrER Binding Assay, Performance Criteria for the Reference Estrogen and Weak Binders ^a	50
Table 22. Criteria for Assigning Classification Based Upon Test Chemical Binding Curve	56
Table 23. Method for classification of test chemical using multiple runs within a laboratory	58

List of Figures

Figure 2. Examples, Competitive Binding Curves with and without Use of the 10% Rule.	52
Figure 3. Example of test run where the use of 10% rule is inappropriate. (A). Data from full concentration curve. (B) Deletion of data at higher concentrations is inappropriate use of 10% rule.	53
Figure 4. Comparison of curve fits using four parameter Hill equation with unconstrained and constrained estimates for the top, bottom, slope and Log (IC ₅₀).....	53
Figure 6. Examples of chemical classification using competitive binding curves.	57

1.0 Purpose of the Assay

This assay is a screening procedure for identifying compounds that can bind to the human recombinant full length estrogen receptor- α (hrER α). It is used to determine the ability of a test compound to compete with 17 β -estradiol for binding to the full length hrER α . Quantitative assay results may include the IC₅₀ (a measure of the concentration of test compound needed to displace half of the [³H]-17 β -estradiol from the hrER α) and the relative binding affinities of test compounds for the hrER α compared to 17 β -estradiol. For chemical screening purposes, acceptable qualitative assay results may include classifications of test chemicals as either hrER α binders, non-binders, or equivocal based upon criteria described for the binding curves. The basic procedure for this assay have been published in Reproductive Toxicology, 30:50-59 (2010).

2.0 Safety and Operating Precautions

All procedures with radioisotopes and hazardous compounds should follow the regulations and procedures as described by national legislation.

3.0 Detailed Summary of the Assays

Binding assays include both the saturation binding assay as well as the competitive binding assay.

- **Saturation binding:** The purpose of the saturation binding assay is to determine how much receptor in the reaction can be bound by [³H]-17β-estradiol. In this assay the amount of receptor is held constant while the amount of [³H]-17β-estradiol is added in increasing doses until the amount of hot receptor bound reaches a plateau. This is considered the total binding. The values in the total binding curve can be adjusted to account for the non-specific binding. To do so, a large amount of cold estradiol is added to each of the dose response tubes. Any remaining hot estradiol that can bind to the receptor is considered to be binding at a non-specific site as the cold estradiol should be at such a high concentration that it is bound to all of the available specific sites on the receptor. Once the non-specific binding is determined, it can be subtracted from the total binding to reveal the specific binding. The specific binding curve will reach a plateau. At this point the receptor is saturated and the maximum estradiol that can be bound by receptor (or B_{max}) is determined. The saturation assay establishes the amount of active receptor protein in the assay and the K_d (dissociation constant), or binding affinity, of the [³H]-17β-estradiol for the receptor. By performing the saturation binding assay before the competitive binding assay, a more accurate calculation for receptor concentration can be used in the competitive binding assays.
- **Competitive binding:** The competitive binding assay is used to indicate whether a chemical compound can bind to the hrERα and give an indication of the affinity that the compound has for the receptor. The assay works by measuring how well a given compound competes with the radiolabeled ligand (in this case, [³H]-17β-estradiol) for specific binding to the receptor (hrERα). A chemical with high affinity will bind to the receptor and displace the [³H]-17β-estradiol at lower concentrations. As the chemical concentration increases, a chemical that specifically binds to the hrERα will displace a greater amount of [³H]-17β-estradiol. Test compounds are always run with a standard reference estrogen (17β-estradiol, the native ligand), a weak binder (norethynodrel or norethindrone), and a non-binder (dibutyl phthalate (DBP) or octyltriethoxysilane)¹. By incorporating these three controls into each run of the assay, the technician can determine if the run was performed correctly. The controls also provide references for the test compounds by demonstrating the range of potential binding affinities (i.e., is the test compound a strong, weak binder or a non-binder?).

¹ Two options are provided for control weak binders and non-binders to ensure chemical availability.

4.0 Terminology

Table 1. List of Terms

<i>Term</i>	<i>Meaning</i>
[³ H]E ₂	17β-Estradiol, radiolabeled with tritium
H ₂ O	Double distilled water or water of comparable quality
DTT	Dithiothreitol
E ₂	17β-Estradiol (non-radiolabelled estradiol)
DCC	Dextran coated charcoal
BSA	Bovine serum albumin
Assay buffer	10 mM Tris, 10 mg BSA/mL, 2 mM DTT, 10% glycerol, 0.2 mM leupeptin, pH 7.5
Tris	Tris(hydroxymethyl)aminomethane
replicate	One of multiple wells that contain the same contents at the same concentrations and are assayed concurrently within a single run. In this protocol, each concentration of test compound is tested in triplicate; that is, three replicates are assayed simultaneously at each concentration of test compound.
run	A complete set of concurrently-run microtiter plate assay wells that provides all the information necessary to characterize binding of a test compound to the hrERα (viz., total [³ H]-17β-estradiol added to the assay well, maximum binding of [³ H]-17β-estradiol to the hrERα, nonspecific binding, and total binding at various concentrations of test compound). A run could consist of as few as one assay well (i.e., replicate) per concentration, but since this protocol requires assaying in triplicate, one run consists of three assay wells per concentration. In addition, this protocol requires three independent (i.e., non-concurrent) runs per chemical.

5.0 Equipment and Materials

5.1 Equipment

- Stir/hot Plates
- Pipettes:
Mechanical, variable volume pipettor (must be calibrated on a regular basis. Check volumes on a high sensitivity scale; for example, 10 microliters (μL) = 10 μg). Pipettors needed include:
0.5 to 10 μL
2 to 20 μL
20 to 200 μL
100 to 1000 μL
2 to 10 mL
- Repeating pipettors
to 2.5 mL
- Programmable pipettors
0.5 to 2.5 mL
- Multi-channel pipettor (recommended)
- Balance, analytical
- Shaker for microtiter plates
- General Laboratory Centrifuge with special insert for the use with microtiter plates at 4°C (a temperature range of 2° to 8°C is appropriate)
- pH Meter with Tris-Compatible Electrode with traceable standards (pH: 4, 7, and 10)
- Liquid scintillation counter (LSC) with traceable standards (calibrated)
- LSC for the use with microtiter plates (optional) or scintillation vials
- Traceable Thermometers for monitoring refrigerator and freezer temperatures
- 80°C freezer (temperature recorded weekly during the business week and monitored for off-hour emergencies)
- -20°C freezer (temperature recorded weekly during the business week, and monitored for off-hour emergencies)
- 4°C refrigerator (temperature recorded weekly during the business week, and monitored for off-hour emergencies, a temperature range of 2° to 8°C is appropriate)
- Tube racks

5.2 Reagents

(ACS Reagent Grade or Better)

- Full length human recombinant estrogen receptor-alpha (hrER α)²
- DTT, Dithiothreitol, CAS 3483-12-3, Mol. Wt. 154.3
- Unlabeled 17 β -estradiol (E₂), CAS 50-28-2, Mol. Wt. 272.4
- [³H]-17 β -estradiol ([³H]E₂), CAS 50-28-2, Mol. Wt. 272.4 (obtain highest specific activity available).
- Ethyl alcohol (ethanol) (absolute $\geq$ 99.5% purity), CAS 64-17-5
- Dimethyl sulfoxide (DMSO), CAS 67-68-5, Mol. Wt. 78.13

² The full length recombinant estrogen receptor, alpha (hrER α) used for the validation study was purchased from Life Technologies (formally PanVera/Invitrogen). The vendor is mentioned here as an example. In general, unless specifically identified, all mention of trade names or vendors should be considered as an example only.

- Glycerol 99%, CAS 56-81-5, Mol. Wt. 92.10
- DCC, Dextran coated charcoal (purchased as a mixture of 10 acid washed charcoal:1 dextran (w/w), MW 64-76 kDa
- Norethynodrel (weak control for assay standardization), CAS 68-23-5, Mol. Wt. 298.4; Alternate weak binder, Norethindrone, CAS 68-11-4. Mol. Wt. 298.4.
- Di-n-butylphthalate (non-binder control for assay standardization) CAS 84-74-2, Mol. Wt. 278.34; Alternate non-binder, Octyltriethoxysilane, CAS 2943-75-1. Mol. Wt. 276.49.
- Leupeptin hemisulfate salt, Acetyl-Leu-Leu-Arg-al hemisulfate salt $\geq 90\%$, CAS 103476-89-7 Mol. Wt. 475.59
- BSA, Bovine serum albumin $\geq 96\%$, CAS 9048-46-8, Mol. Wt. ~ 66 kDa
- Scintillation Cocktail – in conventional beta counter (any standard scintillation cocktail can be used)
- Scintillation Cocktail for use with microtiter plates – due to small volumes in plate, use cocktail with a high capacity to take up water
- Tris Base, Tris(hydroxymethyl)aminomethane, CAS 77-86-1, Mol. Wt. 121.1
- HCl, Hydrochloric acid, CAS 7647-01-0, Mol. Wt. 36.46
- NaOH, Sodium hydroxide, CAS 1310-73-2, Mol. Wt. 40.0
- Accurate pH Standards purchased from a company: including pH 4, 7, and 10

5.3 **Supplies**

- 96-Well polypropylene microtiter round-bottom plates
- 20 mL Scintillation Vials
- Graduated cylinders of various sizes
- Erlenmeyer flasks of various sizes
- Volumetric flasks of various sizes, amber-colored glass
- 10 mL amber-colored glass tubes
- Pipette tips
- Gloves
- Screw cap siliconized amber-colored glass vials, for storing 17β -estradiol in ethanol and for preparing test compound dilutions.

5.4 **Software**

5.4.1 **Nonlinear Curve-Fitting Software**

Select a statistical package capable of analyzing saturation and competitive binding data. K_d and B_{max} should be analyzed using nonlinear regression and then graphed as a Scatchard plot. For example:

- GraphPad Prism (GraphPad Software Inc., San Diego, CA) Motulsky, 1995
- KELL (includes Radlig and Ligand, Biosoft, Cambridge, UK) McPherson. c1997
- Statistical Analysis System (SAS Institute Inc., Cary, NC) McPherson, 1985

5.4.2 **Spreadsheet Software**

For example, Microsoft Excel or compatible.

6.0 Preparation of Buffer Solutions

Unless specified, prepare buffer stock solutions at least one day and not more than six months before assay:

6.1 Stock Solutions

6.1.1 10 X Stock (100 mM Tris-Buffer pH 7.5)

To prepare 1 L solution weigh 12.11 g Tris base, dissolve in 800 mL water, and adjust the pH to 7.5 using 5 M HCl. Bring the final volume up to 1 L (store buffer at room temperature or refrigerate - may be used for up to 6 months, discard if buffer becomes cloudy)

6.2 Working Assay Buffer

(This buffer solution is prepared daily as needed.)

6.2.1 hrER α Binding Assay Buffer pH 7.5

To prepare 200 mL buffer, add 20 mL of 10X stock Tris-Buffer (100 mM), and dissolve the following amounts below of Leupeptin, DTT, BSA, and Glycerol into 150 mL of water. Bring up to a final volume of 200 mL (see Appendix A for buffer preparation worksheet). The following components should make up the working assay buffer:

Table 2. Components of Assay Buffer

<i>Compound/solution</i>	<i>Final concentration in buffer</i>
100 mM Tris-Buffer pH 7.5 (10X)	10 mM Tris-Buffer pH 7.5
19.0 mg Leupeptin 1/2 H ₂ SO ₄ (MG 475.6)	0.2 mM Leupeptin
61.7 mg DTT (MG 154.2)	2 mM DTT
2000 mg BSA	10 mg BSA/mL
20 mL Glycerol	10% Glycerol

Prepare this buffer in the morning of the saturation or competitive binding assay. Store unused buffer overnight at 2° to 8°C. On the next day, use it to prepare the DCC suspension.

7.0 Demonstration of Acceptable hrER α Receptor Protein Performance

Prior to routinely conducting the saturation and competitive binding assays, each new batch of hrER α must be shown to be performing correctly in the laboratory in which it will be used. A two-step process is required to demonstrate performance. These steps are:

- 1) Conduct a saturation [^3H]-17 β -estradiol binding assay to demonstrate hrER α specificity and saturation. Nonlinear regression analysis of these data (e.g., BioSoft; McPherson, 1985; Motulsky, 1995) and the subsequent Scatchard plot should document hrER α binding affinity of the [^3H]-17 β -estradiol (K_d) and the number of receptors (B_{max}) for a particular batch of hrER α .
- 2) Conduct a competitive binding assay using the control chemicals (e.g., reference estrogen (17 β -estradiol), a weak binder (e.g., norethynodrel or norethindrone), and a non-binder (DBP or octyltriethoxysilane). Each laboratory should document the consistency of IC_{50} values for the reference estrogen and a weak binder (i.e., the concentration of a substance that inhibits [^3H]-17 β -estradiol binding by 50%) for each new batch of hrER α with those values obtained for previous batches of hrER α when using the identical protocol. In addition, the parameters of the competitive binding curves for the control chemicals should be within the limits of the tolerance bounds (Table 3) that were developed using data from all laboratories that participated in the validation study for this assay.

8.0 Demonstration of Laboratory Proficiency

Each assay (saturation and competitive binding) consists of three runs on different days, and each run contains three replicates.

The laboratory must prove its capability to adequately perform studies using the hrER α binding assay by performing saturation and competitive binding experiments. Measures of assay performance are provided in both the saturation and competitive binding sections of this protocol and serve as a guide to evaluate whether or not each component of the assay is functioning correctly. In addition, performance criteria are provided for parameters of competitive binding curves generated for the control chemicals during each run of the assay. Criteria for the classification of a test compound binding to hrER α as a binder, equivocal, or non-binder are listed in the competitive binding assay protocol.

Before using the competitive binding assay for test compounds, a laboratory must meet the performance criteria for each of the controls (reference estrogen, weak binder, and non-binder) and successfully classify the proficiency listed in Table 3. This will confirm the responsiveness of the test system as well as demonstrate the ability of the laboratory (technician) to conduct, analyze the data, and interpret the results. The proficiency chemicals are commercially available, represent the classes of chemicals commonly associated with ER binding activity, and exhibit a suitable range of potency expected for ER binding (i.e., strong to weak) and negatives (non-binders). Proficiency is demonstrated by correct classification (binder or non-binder) of each chemical. Proficiency testing should be repeated by each technician when learning the test methods.

Table 3. List of controls and proficiency chemicals for the hrER competitive binding assay.

No.	Chemical Name	CAS RN	Expected Response ^{1,2}	Test concentration range (M)	MeSH Chemical Class ⁴	Product Class ⁵
Controls (Reference Estrogen, Weak Binder, Non-binder)						
1	17 β -estradiol	50-28-2	Binder		Steroid	Pharmaceutical, Veterinary Agent
2	Norethynodrel (or) Norethindrone	68-23-5 (or) 68-22-4	Binder		Steroid	Pharmaceutical, Veterinary Agent
3	Di-n-butylphthalate (DBP)	84-74-2	Non-binder ³		Hydrocarbon (Cyclic), Phenol	Plasticizer, Chemical Intermediate
Proficiency Chemicals⁶						
4	Diethylstilbestrol	56-53-1	Binder		Hydrocarbon (Cyclic)	Pharmaceutical, Veterinary Agent
5	17 α -Estradiol	57-91-0	Binder		Steroid	Pharmaceutical, Veterinary Agent
6	<i>meso</i> -Hexestrol	84-16-2	Binder		Hydrocarbon (Cyclic), Phenol	Pharmaceutical, Veterinary Agent
7	Tamoxifen	10540-29-1	Binder		Hydrocarbon (Cyclic)	Pharmaceutical
8	Genistein	446-72-0	Binder		Flavonoid, Heterocyclic Compound	Natural Product, Pharmaceutical
9	Bisphenol A	80-05-7	Binder		Phenol	Chemical Intermediate
10	Zearalonone	17924-92-4	Binder		, Heterocyclic Compound	Natural Product
11	p,p'-Methoxychlor	72-43-5	Binder		Hydrocarbon (Halogenated)	Pesticide, Veterinary Agent
12	Ethyl paraben	120-47-8	Binder		Carboxylic Acid, Phenol	Pharmaceutical, Preservative
13	Atrazine	1912-24-9	Non-binder		Heterocyclic Compound	Herbicide
14	Octyltriethoxysilane	2943-75-1	Non-binder		Silane	Surface modifier
15	Corticosterone	50-22-6	Non-binder		Lactone, Steroid	Pharmaceutical, Veterinary Agent

Abbreviations: CAS RN = Chemical Abstracts Service Registry Number;

¹Classification as an ER α Binder or Non-binder during the validation study for the CERI and FW hrER Binding Assays

²ER binding activity was based upon the ICCVAM Background Review Documents (BRD) for ER Binding and TA test methods (31) (32) as well as empirical data and other information obtained from referenced studies published and reviewed (3) (30) (31) (32) (33) (34) (35).

³Limit of solubility for substance = 10⁻⁴ M.

⁴Substances were assigned into one or more chemical classes using the U.S. National Library of Medicine's Medical Subject Headings (MeSH), an internationally recognized standardized classification scheme (available at: <http://www.nlm.nih.gov/mesh>).

⁵Substances were assigned into one or more product classes using the U.S. National Library of Medicine's Hazardous Substances Database (available at: <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>)

⁶If a Proficiency Chemical is no longer commercially available, a substance with the same ER binding classification, comparable potency, and chemical class can be used.

Saturation Binding FW Assay Working Protocol

9.0 FWA Saturation Binding: Working Protocol

The Saturation Binding Assay measures total, non-specific, and specific binding of increasing concentrations of [³H]-17 β -estradiol under equilibrium conditions. Three concurrent replicates are required at each concentration within one run. Three non-concurrent runs are required for each compound tested. In general, one technician should set up no more than three and a half microtiter plates on one day.

9.1 Summary of Saturation Binding Assay Steps

The Day Before the Binding Assay:

- Prepare Tris buffer stock solution.
- Define position of samples on microtiter plates and label plates.
- Prepare calculations for dilution of radioisotope (i.e., calculations for dilutions in Tables 1 and 2, determine number of wells/microtiter plates needed).
- Label wells/microtiter plates for the [³H]-17 β -estradiol and the unlabeled 17 β -estradiol.

The Morning of the Binding Assay:

- Prepare assay buffer.
- Prepare the [³H]-17 β -estradiol dilutions for saturation binding ([Table 2](#)).
- Prepare the unlabeled 17 β -estradiol dilutions ([Tables 3](#) and [4](#)).
- Prepare hrER α dilution (immediately prior to use).

Day Two of the Binding Assay In the Morning:

- Prepare DCC suspension.
- Separate bound from free [³H]-17 β -estradiol.
- Extract and quantify [³H]-17 β -estradiol bound to hrER α .

Following the Binding Assay:

- Record raw data output from scintillation counter into spreadsheet.
- Begin data analysis to determine if the runs meet performance criteria.
- If performance criteria are not met, determine potential areas for error and repeat experiment.

Table 4. Summary of Saturation Binding Assay Conditions

	<i>Freyberger-Wilson Assay Protocol</i>
Type of Receptor	PanVera full length hrER α
Concentration of [³ H]-17 β -estradiol	0.03 to 3.0 nM
Concentration of unlabeled 17 β -estradiol	0.03 to 3.0 μ M (1000-fold excess)
Concentration of hrER α	To be determined (see 9.2.5) Frequently, a nominal concentration of 0.5 nM is appropriate
Temperature	2° to 8°C
Incubation time	16 to 20 hours
DCC Concentration	(10 acid washed charcoal:1 dextran (w/w)) 1.67%

		<i>Freyberger-Wilson Assay Protocol</i>
Composition of assay buffer	Tris-HCl	10 mM (pH 7.5)
	Glycerol	10%
	Leupeptin	0.2 mM
	Bovine Serum Albumin (BSA)	10 mg/mL
	Dithiothreitol (DTT)	2 mM

9.2 Preliminary Steps

Perform the following steps on the day of the assay.

9.2.1 Preparation of Assay Buffer

See [Section 6.2.1](#) and/or buffer preparation worksheet ([Appendix A](#)).

9.2.2 Preparation of [³H]-17β-Estradiol Stock Solution

Store [³H]-17β-estradiol at -20°C in the original container.

[³H]-17β-Estradiol is usually shipped from vendor in ethanol. Prepare dilutions of the [³H]-17β-estradiol in assay buffer to achieve the concentrations noted in Column B of Table 2. Siliconized, amber-colored glass tubes should be used when preparing serial dilutions.

To calculate the amount of stock [³H]-17β-estradiol to add to buffer to make the 12 nM [³H]-17β-estradiol stock dilution in assay buffer, follow the example given below:

Estradiol [2,4,6,7,16,17- ³H]-stock from the manufacturer has, for example, the following specification (note: this will vary and dilutions must be recalculated with each batch):

5.19 TBq/mmol and 37 MBq/mL

where

5.19 TBq/mmol = 5,190 GBq/mmol = 5,190 MBq/μmol = 5,190 KBq/nmol = 5.190 KBq/pmol,

and

37 MBq/mL = 37 KBq/μl

To prepare 5.00 mL (sample volume for the saturation experiment) of a 12 nanomolar [³H]-17β-estradiol solution in assay buffer:

12 nM = 12 nmol/1L = 12 nmol/1,000 mL,
5 mL × (12 nmol ÷ 1,000 mL) = 0.06 nmol = 60 pmol are needed.

60 pmol corresponds to 60 pmol × 5.190 KBq/pmol = 311.4 KBq = 311,400 Bq.

Therefore 60 pmol correspond to $311.4 \text{ KBq} \div 37 \text{ KBq}/\mu\text{l} = 8.4 \mu\text{l}$.
Accordingly, pipet 8.4 μl stock [^3H]-17 β -Estradiol into 4.992 mL hrER α receptor binding assay buffer and mix carefully.

Confirm the concentration of [^3H]-17 β -estradiol by measuring the dpm in a LSC. Measure the dpm of 40 μl aliquots in triplicate. Use 20 mL LSC vials with a minimum of 10 mL LSC cocktail. Average the dpm values from these three vials and compare to the nominal value as calculated: The nominal radioactivity (where, 1 Bq = 60 dpm) in this aliquot is:

$$(311,400\text{Bq} \div 5,000 \mu\text{L}) \times (60 \text{ dpm/Bq}) = 3,736.8 \text{ dpm} \div \mu\text{L}$$

$$3,736.8 \text{ dpm} \div \mu\text{L} \times 40 \mu\text{L} = 149,472 \text{ dpm}$$

A deviation of 6% from the nominal values is considered acceptable. In case of more pronounced deviation, adjust the concentration, either by adding a small amount of stock [^3H]-17 β -estradiol or adding assay buffer. After the concentration is adjusted, confirm the final concentration by measuring the dpm of three additional 40 μL aliquots.

Note: Always store stock [^3H]-17 β -estradiol solution at -20°C to prevent degradation of the tritiated hormone.

9.2.3 Preparation of [^3H]-17 β -Estradiol Dilutions

Prepare the dilutions as described in Table 2. Add assay buffer to dilute the stock solution of 12 nM [^3H]-17 β -estradiol and thoroughly mix.

Table 5. Preparation Procedure for [^3H]-17 β -Estradiol Dilutions

Tube #	Stock concentration	Volume of stock to add for diluted concentration	Buffer to bring to final volume	Final volume of diluted [^3H]-17β-estradiol	Diluted [^3H]-17β-estradiol concentration	*Final [^3H]-17β-estradiol concentration (nM) in hrERα assay well
Column A	Column B	Column C	Column D	Column E	Column F	Column G
H8	12 nM (Stock)	-	-	-	12 nM	3 nM
H7	12 nM	500 μL	1000 μL	1.5 mL	4 nM	1 nM
H6	4 nM	600 μL	400 μL	1.00 mL	2.4 nM	0.6 nM
H5	2.4 nM	500 μL	500 μL	1.00 mL	1.2 nM	0.3 nM
H4	1.2 nM	500 μL	1000 μL	1.50 mL	0.4 nM	0.1 nM
H3	0.4 nM	800 μL	200 μL	1.00 mL	0.32 nM	0.08 nM
H2	0.32 nM	600 μL	200 μL	0.8 mL	0.24 nM	0.06 nM
H1	0.24 nM	400 μL	400 μL	0.8 mL	0.12 nM	0.03 nM

**When 40 μL of each standard (Column F) is added to the hrER α assay well, the final concentration will be as indicated (Column G) when the total volume in the hrER α assay well is 160 μL .*

The final solutions made for Column F can now be used, adding 40 μL to the respective assay wells of a 96-well microtiter plate (in a final volume of 160 μL) to obtain the final assay concentrations in Column G.

A total of 360 μL is needed for each concentration of [^3H]-17 β -estradiol, whereas according to the scheme above for some concentrations only a total of 400 μL will be available. If this is not sufficient for the type of pipets used in a laboratory, proportionally larger volumes should be prepared.

9.2.4 Preparation of Unlabeled 17 β -Estradiol for Non-Specific Binding (NSB) Wells

Use siliconized, glass vials with caps to prevent evaporation. Protect stock and dilutions from light using aluminum foil wrapped vials or equivalent vials when preparing stock and series dilutions.

- Make a stock solution (10 mM): weigh out 13.62 mg of 17 β -estradiol (M.W. 272.4) in a 5.00 mL volumetric flask, dissolve and bring final volume to 5.00 mL with absolute ethanol, final concentration = 2.724 mg/mL (10 mM). Mix well. Make a secondary stock by pipetting 1 mL of the 10 mM stock and mixing with 9 mL absolute ethanol in an appropriate glass vial, final concentration = 1 mM (or 1000 μM). Prepare two further stocks by pipetting 3 mL (stock A) or 1 mL (stock B) of the 1000 μM stock and mixing with 7 mL or 9 mL absolute ethanol in an appropriate glass vial, final concentrations = 0.08172 mg/mL (300 μM - stock A) = 0.02724 mg/mL (100 μM - stock B).

Note: Be sure to prepare the dilutions in capped tubes as the ethanol in the stock solution and dilutions is volatile and any evaporation could change the concentrations of your final dilutions.

As shown in Table 6, create a series of dilutions in ethanol to make the appropriate dilutions for Column B of Table 7. Once Stocks A and B are made, perform 1:10 dilutions to obtain the 30 μM , 10 μM and 3 μM stocks for Column B. Similarly, use the 300 μM stock and perform a 2:10 dilution to obtain the 60 μM stock in Column B. Following this, perform a 1:10 dilution of the 60 μM stock to obtain the 6 μM stock for Column B. Finally, perform a 8:10 dilution of the 10 μM stock to obtain the 8 μM stock for Column B

Table 6. Preparation of Unlabeled 17 β -Estradiol Dilutions in Ethanol

<i>Stock</i>	<i>Dilutions for Column B, Table 7</i>
300 μ M (stock A)	300 μ M
100 μ M (stock B)	100 μ M
300 μ M (2:10 dilution)	60 μ M
300 μ M (1:10 dilution)	30 μ M
100 μ M (1:10 dilution)	10 μ M
10 μ M (8:10 dilution)	8 μ M
<i>Stock</i>	<i>Dilutions for Column B, Table 4</i>
60 μ M (1:10 dilution)	6 μ M
30 μ M (1:10 dilution)	3 μ M

Table 7. Preparation Procedure for Unlabeled 17 β -Estradiol Dilutions

<i>Tube #</i>	<i>Concentration</i>	<i>Volume of serial dilution to add for diluted concentration</i>	<i>Buffer to bring to final volume</i>	<i>Final volume of diluted 17β-estradiol</i>	<i>Diluted 17β-estradiol concentration</i>	<i>*Final 17β-estradiol concentration (μM) in hrERα assay well</i>
<i>Column A</i>	<i>Column B</i>	<i>Column C</i>	<i>Column D</i>	<i>Column E</i>	<i>Column F</i>	<i>Column G</i>
HC8	300 μ M	50 μ L	2.45 mL	2.5 mL	6 μ M	3 μ M
HC7	100 μ M	50 μ L	2.45 mL	2.5 mL	2 μ M	1 μ M
HC6	60 μ M	50 μ L	2.45 mL	2.5 mL	1.2 μ M	0.6 μ M
HC5	30 μ M	50 μ L	2.45 mL	2.5 mL	0.6 μ M	0.3 μ M
HC4	10 μ M	50 μ L	2.45 mL	2.5 mL	0.2 μ M	0.1 μ M
HC3	8 μ M	50 μ L	2.45 mL	2.5 mL	0.16 μ M	0.08 μ M
HC2	6 μ M	50 μ L	2.45 mL	2.5 mL	0.12 μ M	0.06 μ M
HC1	3 μ M	50 μ L	2.45 mL	2.5 mL	0.06 μ M	0.03 μ M

*When **80 μ L** of each standard (Column F) is added to the hrER α assay well, the final concentration will be as indicated (Column G) when the total volume in the hrER α assay well is 160 μ L.

- Dilute with assay buffer: Dilute the ethanolic 17 β -estradiol solutions with assay buffer to achieve the concentrations shown in Table 7, Column F. To do so, add 50 μ L of the 17 β -estradiol ethanol solutions above to 2.45 mL of assay buffer to yield 2.5 mL solution. By adding 80 μ L of these solutions to the respective assay wells of a 96-well microtiter plate (in a final volume of 160 μ L) the final assay concentrations in Column G will be obtained. The final concentration of unlabeled 17 β -estradiol in the individual NSB assay wells should be 1000-fold of the labeled [^{3} H]-17 β -estradiol concentration.

9.2.5 Determination of Receptor (hrER α) Concentration

Under conditions corresponding to competitive binding (i.e., 1 nM [^{3} H]-estradiol), nominal concentrations of 0.25, 0.5, 0.75, and 1 nM receptor are incubated in the absence (total binding) and presence (non-specific binding) of 1 μ M unlabeled estradiol. Specific binding, calculated as the difference of total and non-specific

binding, is plotted against the nominal receptor concentration. The concentration of receptor that gives specific binding values corresponding to 20% of added radiolabel is related to the corresponding nominal receptor concentration, and this receptor concentration shall be used for saturation and competitive binding experiments. If the 20% criterion repeatedly cannot be met, the experimental set up should be checked for potential errors. Failure to achieve the 20% criterion may indicate that there is very little active receptor in the recombinant batch, and the use of another receptor batch should then be considered.

The final nominal receptor concentration is determined according to the 20% criterion above. To conduct the assay, prepare a stock solution in assay buffer immediately prior to use. Dilute the hrER α into 10.0 mL assay buffer, so that the final concentration used per well is equivalent to 20% specific binding. Frequently, a final nominal hrER concentration of 0.5 nM will comply with this condition. **Caution! Do not vortex. Avoid foaming.** Only mix/stir gently in order to obtain a homogenous solution. The 10 mL receptor solution is sufficient for 2 microtiter plates (2 $\times$ 96 wells plus reserve) if the hrER concentration meets the above criteria. Use receptor solution immediately after preparation.

To aliquot the original hrER from the manufacturer for storage and future use, the preparation is thawed on ice, gently mixed/stirred gently in order to ensure a homogenous solution, and aliquoted. Aliquots are frozen in liquid nitrogen and kept at -80°C. **Caution! Do not vortex. Avoid foaming.** Example: An aliquot corresponding to 20 pmol and made up to 10 mL with assay buffer provides a final nominal concentration of 0.5 nM hrER and is sufficient for two 96-well plates with comfortable reserve. It is important to adjust the hrER solution if the final nominal receptor concentration of 0.5 nM does not comply with the 20% specific binding criteria.

Be sure to record your dilution calculations for future analysis of any discrepancies in the data.

9.3 ***Preparation of Saturation Binding Assay Microtiter Plates***

Prepare microtiter plates as demonstrated in [Table 8](#) below. An example of a saturation assay microtiter plate layout is provided in [Appendix B](#).

Note: Wells A1-B12 receive assay buffer with an amount of solvent corresponding to wells D1-E12, serial dilutions of ^3H -labeled 17 β -estradiol and hrER α ; wells D1-E12 receive serial dilutions of ^3H -labeled 17 β -estradiol, inert (1000 X) 17 β -Estradiol and hrER α . The volume of each component added to wells is indicated in the saturation assay well layout as seen in [Appendix B](#).

Table 8. Sample Saturation Binding Assay Microtiter Plate Layout

	1	2	3	4	5	6	7	8	9	10	11	12	
A	0.03 nM [³ H] E ₂ + ER			0.06 nM [³ H] E ₂ + ER			0.08 nM [³ H] E ₂ + ER			0.10 nM [³ H] E ₂ + ER			Total Binding (Solvent)
B	0.30 nM [³ H] E ₂ + ER			0.60 nM [³ H] E ₂ + ER			1.0 nM [³ H] E ₂ + ER			3.0 nM [³ H] E ₂ + ER			
C													
D	0.03 nM [³ H] E ₂ + ER + 0.03 μM E ₂			0.06 nM [³ H] E ₂ + ER + 0.06 μM E ₂			0.08 nM [³ H] E ₂ + ER + 0.08 μM E ₂			0.10 nM [³ H] E ₂ + ER + 0.10 μM E ₂			Non-Specific Binding
E	0.30 nM [³ H] E + ER + 0.30 μM E ₂			0.60 nM [³ H] E + ER + 0.60 μM E ₂			1.0 nM [³ H] E + ER + 1.0 μM E ₂			3.0 nM [³ H] E + ER + 3.0 μM E ₂			
F													
G													
H													

- Incubate assay microtiter plates at 2° to 8°C for 16 to 20 hours. Microtiter plates should be placed on a rotator during the incubation period.

9.4 Completion of Saturation Binding Assay

After incubation of the microtiter plates, complete the saturation binding assay following the steps below.

9.4.1 Preparation of 5% DCC Suspension

- To prepare 25 mL of the charcoal slurry, suspend 1.25 g charcoal in a glass flask with 25 mL assay buffer (prepared on the 1st day of the assay and keep at 2° to 8°C). Place a stir bar in the flask and stir thoroughly on a magnetic stir plate for at least 3 minutes before use. Make a new batch of DCC suspension just before use and use immediately. Stir continuously when drawing samples. The volume prepared will accommodate 300 assay wells, or about three 96-well microtiter plates.

Note: Be sure that you have enough DCC solution to accommodate all of your assay wells. Calculate 80 μL per well multiplied by the number of wells in the run.

9.4.2 Separation of [³H]-17β-Estradiol Bound to hrERα from Free [³H]-17β-Estradiol

Note: To minimize dissociation of bound [³H]-17β-estradiol from the hrERα during this process, it is extremely important that the buffers and assay wells be kept ice-cold and that each step be conducted quickly. A shaker for microtiter plates is necessary to process plates efficiently and quickly.

- Remove saturation binding assay microtiter plates from the 2° to 8°C incubation. Using a repeating pipette, quickly add 80 μL of cold DCC suspension to each well.

- Place the microtiter plates on the shaker at 2° to 8°C and shake for 10 minutes. Then centrifuge at 4°C (range of 2° to 8°C) for 10 minutes at about 2500 RPM.
- After centrifugation, the separation of the free [³H]-17β-estradiol and hrERα bound [³H]-17β-estradiol has been completed.

9.4.3 Extraction and Quantification of [³H]-17β-Estradiol Bound to hrERα

- Immediately after the centrifugation step, pipet 50 μL of supernatant containing the hrERα-bound [³H]-17β-estradiol from each well into the corresponding well on a second microtiter plate. (**Assure that the material of this plate is resistant to scintillation cocktail!**) Pipetting is most rapidly and conveniently done using a multi-channel pipet. **Be EXTREMELY careful not to contaminate your aliquot by touching or pipetting any DCC with the supernatant aliquot!!!**
- In addition, wells G1-H12 (identified as total dpms) represent serial dilutions of the [³H]-17β-estradiol (40 μL) that should be delivered directly into the scintillation fluid in the wells of the measurement plate as indicated in Table 6, i.e., these wells contain only 200 μL of scintillation fluid and the appropriate dilution of [³H]-17β-estradiol. These measures demonstrate how much [³H]-17β-estradiol in dpms was added to each set of wells for the total binding and non-specific binding.

Table 9 . Sample Saturation Binding Assay Microtiter Plate Layout, Radioactivity Measurement

	1	2	3	4	5	6	7	8	9	10	11	12	
A	0.03 nM [³ H] E ₂ + ER			0.06 nM [³ H] E ₂ + ER			0.08 nM [³ H] E ₂ + ER			0.10 nM [³ H] E ₂ + ER			Total Binding (Solvent)
B	0.30 nM [³ H] E + ER			0.60 nM [³ H] E + ER			1.0 nM [³ H] E ₂ + ER			3.0 nM [³ H] E ₂ + ER			
C													
D	0.03 nM [³ H] E ₂ + ER + 0.03 μM E ₂			0.06 nM [³ H] E ₂ + ER + 0.06 μM E ₂			0.08 nM [³ H] E ₂ + ER + 0.08 μM E ₂			0.10 nM [³ H] E ₂ + ER + 0.10 μM E ₂			Non-Specific Binding
E	0.30 nM [³ H] E + ER + 0.30 μM E ₂			0.60 nM [³ H] E + ER + 0.60 μM E ₂			1.0 nM [³ H] E + ER + 1.0 μM E ₂			3.0 nM [³ H] E + ER + 3.0 μM E ₂			
F													
G	0.03 nM [³ H] E ₂ (total dpms)			0.06 nM [³ H] E ₂			0.08 nM [³ H] E ₂			0.10 nM [³ H] E ₂			Total dpms*
H	0.30 nM [³ H] E ₂			0.60 nM [³ H] E ₂			1.0 nM [³ H] E ₂			3.0 nM [³ H] E ₂			

- *The hot serial dilutions of [³H]-labeled estradiol here should be directly added into 200 μL of scintillation fluid in wells G1 – H12.

- Add 200 μL of scintillation cocktail to each well. Be sure that the cocktail has a high capacity to take up water and is suitable for use according to the type of plate reader being used—see directions specific to your individual plate reader for more information.

Note: Since a 50 μL aliquot is used for scintillation counting, the dpms should be adjusted to account for the total radioactivity in 240 μL of reaction volume + DCC (i.e., $\text{dpms}/50 \mu\text{L} \times 4.8 = \text{Total dpms bound in experiment}$). Total dpms in the hot wells (rows G1-H12) are directly counted so these dpms do not need to be adjusted for volume.

- Place in microtiter plate scintillation counter for determination of dpm/well with quench correction. Start measurement with a delay of at least 2 hours. Counting time is 40 minutes per well.

Note: If a scintillation counter for a microtiter plate is not available, samples may be measured in a conventional counter. Under these conditions, a reduction of counting time may be considered. Large LSC vials with a minimum of 10 mL cocktail should be used.

9.5 Data Analysis

9.5.1 Terminology

- **Total [^3H]-17 β -Estradiol (i.e., Total Added dpms)**

Radioactivity in dpms added to each assay well (dpms in the defined volume of the well can be converted to concentration of [^3H]-17 β -estradiol). There is one total-binding well per concentration of [^3H]-17 β -estradiol per replicate (and three replicates per run).

- **Total Binding**

Radioactivity in dpms in the wells that have only [^3H]-17 β -estradiol available to bind to the hrER α . There is one total-binding well per concentration of [^3H]-17 β -estradiol per replicate (and three replicates per run).

- **Non-Specific Binding (NSB)**

Radioactivity in dpms in the wells that contain excess of unlabeled over labeled 17 β -estradiol. There is one NSB well per concentration of [^3H]-17 β -estradiol per replicate (and three replicates per run).

- **Specific Binding**

Total binding minus non-specific binding.

- **K_d**

Dissociation constant, representing affinity of the radioligand ([^3H]-17 β -estradiol) for the estrogen receptor. Unit is nM.

- **B_{max}**

Maximum number of receptors bound. Unit is fmol hrER α .

9.5.2 Approach to Saturation Binding Assay Analysis

hrER α saturation binding experiments measure total and non-specific binding. From these values, the specific binding of increasing concentrations of [^{3} H]-17 β -estradiol under equilibrium conditions is calculated. A graph of specific binding versus [^{3} H]-17 β -estradiol concentration should reach a plateau for maximum specific binding indicative of saturation of the hrER α with the [^{3} H]-17 β -estradiol. In addition, analysis of the data should document the binding of the [^{3} H]-17 β -estradiol to a single, high-affinity binding site.

Although several saturation radioligand assays may need to be conducted before an optimal saturation curve, K_d , and B_{max} are achieved, a good starting point is to use about 0.5 nM of active recombinant receptor (as determined by the manufacturer) per assay well. The concentration of [^{3} H]-17 β -estradiol should range from 0.03 to 3.0 nM in a total assay volume of 160 μ L. Non-specific binding should be determined by adding excess unlabeled 17 β -estradiol for each concentration of [^{3} H]-17 β -estradiol. Non-specific, total, and specific binding should be displayed on a saturation binding curve. Further analysis of these data should use a non-linear regression analysis (e.g., BioSoft; McPherson, 1985; Motulsky, 1995) with a final display of the data as a Scatchard plot. The data analysis should determine B_{max} and K_d from the total binding data alone, using the assumption that non-specific binding is linear, unless justification is given for using a different method. In addition, robust regression should be used when determining the best fit unless justification is given. The method chosen for robust regression should be stated. Correction for ligand depletion (e.g., using the method of Swillens 1995) should always be used when determining B_{max} and K_d from saturation binding data.

An example of a saturation assay worksheet using increasing concentrations of radioligand is provided in Appendix B. The worksheet shows how the tubes could be ordered for analysis. The analysis provided in the example is specific to the test conditions noted in the worksheet; **the user should adhere to the worksheet as closely as possible and modify the worksheet only as an exception.** The exception may be that a specific objective demands e.g., a different concentration of hrER α , testing of different [^{3} H]-17 β -estradiol concentrations than suggested, etc.

9.5.3 Measures of Assay Performance for the Saturation Binding Assay

The following measures of assay performance are provided as a general guide to evaluate whether or not the saturation binding assay is functioning correctly within each laboratory.

- As increasing concentrations of [^{3} H]-17 β -estradiol were used, did the specific binding curve reach a plateau? i.e., was maximum specific binding reached, indicating saturation of hrER α with ligand?
- Is specific binding at 1 nM of [^{3} H]-17 β -estradiol consistently 20% of the average measured total radioactivity added (acceptable range 15% to 25%) across runs? Occasional slight excursions outside of this range are acceptable, but if runs are consistently outside this range or a particular

run is significantly outside this range, the protein concentration should be adjusted and the saturation assay repeated.

- Did the data produce a linear Scatchard plot?
- Is non-specific binding excessive? The value for non-specific binding should typically be <35% of the total binding. However, the ratio might occasionally exceed this limit when measuring very low dpm for the lowest concentration of radiolabeled 17 β -Estradiol tested.

9.6 Test Report

The test report must include, but is not limited to, the following information:

9.6.1 [³H]-17 β -Estradiol

- Name, including number and position of tritium atom(s)
- Supplier, catalogue number, and batch number
- Specific Activity (SA) and date for which that SA was certified by supplier
- Concentration as received from supplier
- Concentrations tested (nM)

9.6.2 Unlabeled 17 β -Estradiol

- Supplier, batch, and catalog number
- CAS number
- Purity
- Concentrations added to NSB tubes

9.6.3 Estrogen Receptor (hrER α)

- Type and source of hrER α , and supplier if from a commercial source.
- Method and conditions of transport, handling and storage of hrER α , if applicable.

9.6.4 Test Conditions

- Composition of buffer(s) used.
- hrER α concentration used per well.
- Total volume per assay well.
- Incubation time and temperature.
- Notes on any abnormalities that occurred during any step of the assay including set-up, preparation, incubation or separation of bound and free [³H]-17 β -estradiol.
- Notes on any problems in analysis of bound [³H]-17 β -estradiol.
- Statistical methods used, if any.

9.6.5 Results

For each run, report at least the following. Be sure to include the run identifier on each product.

- Date of run.
- Percent (%) specific binding of the average measured total radioactivity for tubes where 1 nM of [³H]-17 β -estradiol was used.

- Graph of total, specific, and non-specific binding across the range of concentrations tested. Plot each data point (one per replicate) as well as the fitted curve (one per run for each of total, specific, and non-specific binding) on the same graph.
- Graph of measured concentrations in the total [^3H]-17 β -estradiol wells.
- Scatchard plot.
- Raw data (dpm) for each well.
- Estimated K_d
- Estimated $B_{\max}$

If more than one acceptable Saturation Binding Assay was run, also plot the data and curves from up to three runs on a single plot, being sure to distinguish runs (e.g., by color) and type of curve (total, specific, non-specific) (e.g., by line style).

9.6.6 Discussion

Address the items listed in [Section 9.5.2](#), Approach to Saturation Binding Assay Analysis.

9.6.7 Conclusion

Give the estimated K_d of the radioligand ([^3H]-17 β -estradiol) and the estimated $B_{\max}$ of the batch of hrER α used and briefly note any reasons why confidence in these numbers should be high or low.

Competitive Binding FW Assay Working Protocol

10.0 FWA Competitive Binding: Working Protocol

10.1 Summary of Competitive Binding Assay Steps

The Day Before the Binding Assay:

- a) Prepare Tris buffer stock solution (see [Section 6.1.1](#))
- b) Define position of samples on microtiter plates and label plates.
- c) Calculate radioisotope dilution.
- d) Calculate hrER α dilution from stock batch concentration.
- e) Calculate 17 β -estradiol, norethynodrel, dibutyl phthalate, and test compound dilutions..
([Tables 8](#) through [13](#)).
- f) Calculate number of wells/microtiter plates in the run ([Table 14](#)).
- g) Label microtiter plates for standard curve dilutions (see [Table 14](#)).
- h) Label microtiter plates for the test compounds.

The Morning of the Competitive Binding Assay:

- a) Prepare assay buffer (see [Section 6.2.1](#))
- b) Prepare the [^3H]-17 β -estradiol dilutions for competitive binding.
- c) Prepare the dilutions for negative (ER non-binder) control (dibutyl phthalate) and positive (ER binders) controls
(17 β -estradiol and norethynodrel) ([Table 8](#) through [12](#)).
- d) Prepare the test compound concentrations ([Table 13](#)).
- e) Prepare all solutions that go into the test reaction ([Table 15](#)).
- f) Prepare hrER α dilution (immediately prior to use).

Day 2 (The morning following overnight incubation):

- a) Prepare DCC suspension (immediately prior to use).
- b) Separate bound from free [^3H]-17 β -estradiol.
- c) Extract and quantify [^3H]-17 β -estradiol bound to hrER α .

Following the Competitive Binding Assay:

- a) Record raw data output from scintillation counter into spreadsheet.
- b) Analyze data to determine if the runs meet performance criteria.
- c) If performance criteria are not met, determine potential areas for error and repeat experiment.

Table 10. Summary Table of Competitive Binding Assay Conditions

	<i>Freyberger-Wilson Assay Protocol</i>
Type of Receptor	hrER α
Concentration of [^{3} H]-17 β -estradiol	1.0 nM
Concentration of hrER α ^a	To be determined within each laboratory (see section 10.2.3). Nominal concentration to yield 20 $\pm$ 5.0% specific binding when the average measured total [^{3} H]-17 β -estradiol is 1nM.
Concentration of test compound (as serial dilutions)	100 pM to 1 mM**
Temperature	2° to 8° C
Incubation Time	Overnight

^aThis protocol was validated using a full length human recombinant estrogen receptor that was produced in and isolated from baculovirus-infected insect cells (Life Technology, Carlsbad, CA, <http://products.invitrogen.com/ivgn/product/P2187?ICID=search-p2187>). Theoretically, any full length hrER α should perform comparably.

**See section 10.3.2.1 for additional information on determining solubility limit of test chemicals.

		<i>Freyberger-Wilson Assay Protocol</i>
Incubation time		Overnight
DCC Concentration		1.67% (final)
Composition of binding Buffer	Tris-HCl	10 mM (pH 7.5)
	Bovine serum albumin (BSA)	10 mg/mL
	Glycerol	10%
	Leupeptin	0.2 mM
	DTT	2 mM

**Range and spacing of test compound concentrations may need to be adjusted depending on solubility.

Note: The following preparations are calculated for 2 microtiter plates (standards + 4 test compounds). However, it is possible to run 3.5 plates per run (standards + 9 test compounds). Runs of no more than 3.5 microtiter plates are recommended in order to maintain accurate dilutions and manageable set-up times for this assay.

Calculate the number of wells/microtiter plates needed

Calculate the number of assay wells/microtiter plates needed for the entire run with all test compounds included. The example in [Appendix C](#) can readily be placed on two microtiter plates, but up to 3.5 plates can be comfortably run once the technician is familiar with the assay.

10.2 Preliminary Steps

Perform the following steps on the day of the assay.

10.2.1 Preparation of Assay Buffer

See [Section 6.2.1](#) and the buffer-making worksheet in [Appendix A](#).

10.2.2 Preparation of [³H]-17β-Estradiol Stock Solution

Store [³H]-17β-estradiol at -20°C in the original container

Dilute the [³H]-17β-estradiol with assay buffer to yield a 4 nanomolar solution, i.e., the final concentration of [³H]-17β-estradiol in the assay is 1.0 nM. The following detailed steps demonstrate how this is done:

Estradiol [2,4,6,7,16,17-³H]-stock from the manufacturer has the following specification (note: these numbers are only an example, specifications will vary and dilutions must be recalculated for each batch):

$$5.19 \text{ TBq/mmol} = 5190 \text{ GBq/mmol} = 5190 \text{ MBq/}\mu\text{mol} = 5190 \text{ KBq/nmol} = 5.190 \text{ KBq/pmol}$$

$$37 \text{ MBq/mL} = 37 \text{ KBq/}\mu\text{l}$$

To prepare 10.00 mL (a volume sufficient for a **two** microtiter plate experiment) of a 4 nanomolar [³H]-17β-estradiol solution in assay buffer:

$$4 \text{ nM} = 4 \text{ nmol/1L} = 4 \text{ nmol/1000ml} = 0.004 \text{ nmol/mL}$$

$$\text{For 10 mL: } 10 \text{ mL} \times 0.004 \text{ nanomol/mL} = 0.04 \text{ nmol} = 40 \text{ pmols}$$

$$40 \text{ pmol corresponds to } 40 \times 5.190 \text{ KBq} = 207.6 \text{ KBq} = 207,600 \text{ Bq.}$$

$$40 \text{ picomols correspond to } 207.6 \text{ KBq} \div 37 \text{ KBq/}\mu\text{l} = 5.61 \text{ }\mu\text{l.}$$

Accordingly, pipet 5.6 μl stock [³H]-17β-estradiol into 9.994 mL hrER α receptor binding assay buffer, and mix carefully.

Confirm the concentration of [³H]-17β-estradiol by measuring the dpm in a LSC. Measure the dpm of 40 μl aliquots in triplicate. Use 20 mL LSC vials with a minimum of 10 mL LSC cocktail. Enter the triplicate values into the data worksheet in the appropriate columns and average the dpm values from these vials. The nominal radioactivity (1 Bq = 60 dpm) in this aliquot is:

$$(207,600 \text{ Bq} \div 10,000 \text{ }\mu\text{L}) \times (60 \text{ dpm} \div \text{Bq}) \times 40 \text{ }\mu\text{L} = 49,824 \text{ dpm}$$

A deviation of 6% from the nominal values is considered acceptable. In case of more pronounced deviation adjust the concentration, either by adding of a small amount of stock [³H]-17β-estradiol or adding assay buffer. After the concentration is adjusted, confirm the final concentration by measuring the dpm of three additional 40 μL aliquots and entering the information into the data worksheet.

Note: Always store stock [^3H]-17 β -estradiol solution at -20°C to prevent degradation of the radioactive chemical.

Please note that the microtiter plate for radioactive measurement for each competitive binding run reserves wells H1-H6 in [Table 16](#) (identified as Hot) for the final concentrations of [^3H]-17 β -estradiol. The [^3H]-17 β -estradiol should be re-counted in this step in the scintillation counter as described above, and the values recorded as the hot wells in the data worksheet.

10.2.3 Determination of Receptor (hrER α) Concentration

Under conditions corresponding to competitive binding (i.e., 1 nM [^3H]-17 β -estradiol), nominal concentrations of 0.25, 0.5, 0.75, and 1 nM hrER are incubated in the absence (total binding) and presence (non-specific binding) of 1 μM unlabeled estradiol. Specific binding, calculated as the difference of total and non-specific binding, is plotted against the nominal receptor concentration. The concentration of hrER that gives specific binding values corresponding to 20 % of added radiolabel (1 μM) is related to the corresponding nominal hrER concentration, and this hrER concentration shall be used for saturation and competitive binding experiments. If the 20 % criterion repeatedly cannot be met, the experimental set up should be checked for potential errors. Failure to meet the 20 % criterion when testing increasing concentrations of receptor may indicate that there is very little active hrER in the recombinant batch, and the use of another receptor batch should then be considered.

The final nominal receptor concentration is determined according to the 20% criterion above. To conduct the assay, prepare a stock receptor solution in assay buffer immediately prior to use. Dilute the functional recombinant hrER α into 10.0 mL assay buffer, so that the final concentration per well is equivalent to 20% specific binding. Frequently, a final nominal hrER concentration of 0.5 nM will comply with this condition. **Caution! Do not vortex! Avoid foaming!** Only mix/stir gently in order to obtain a homogenous solution. The 10 mL receptor solution is sufficient for 2 microtiter plates (2 $\times$ 96 wells plus reserve). Use receptor solution immediately after preparation.

To aliquot the original receptor from the manufacturer for storage and future use, the preparation is thawed on ice and aliquoted. Aliquots are frozen in liquid nitrogen and kept at -80°C. Example: An aliquot corresponding to 20 pmol and made up to 10 mL with assay buffer provides a final nominal concentration of 0.5 nM and is sufficient for 2 plates with comfortable reserve.

Be sure to record your dilution calculations for future analysis of any discrepancies in the data.

10.3 Preparation of Unlabeled Estradiol-17 β , Controls, and Test Compounds

10.3.1 Description of Controls: Solvent, Buffer, Strong binder (reference estrogen, Weak-binder, and Non-binder. When testing substances for their ability to bind to hrER α , include solvent, controls (e.g., reference estrogen, weak binder, and non-binder) in each experiment (i.e., one set of controls is needed on one plate of each run on a given day). The solvent control indicates that the solvent does not interact with the test system and also measures total binding. The negative control (non-binder, DBP) provides assurance that the assay as run, will detect when chemicals do not bind to the hrER α . A weak binder (norethynodrel or norethindrone) is included to demonstrate the sensitivity of each experiment and to allow an assessment of variability when conducting the assay over time. A standard curve for the reference estrogen (e.g., 17 β -estradiol) is also included to allow for an assessment of variability when conducting the assay over time within the same laboratory.

Control: Reference Estrogen

17 β -estradiol is the endogenous ligand and binds with high affinity to the ER, alpha subtype. A standard curve using unlabeled 17 β -estradiol should be prepared for each hrER α competitive binding assay. Final concentrations of unlabeled 17 β -estradiol in the assay wells should range from 100 nM – 10 pM (-7[logM] to -11[logM]) as demonstrated below. Prepare serial dilutions of 17 β -estradiol in absolute ethanol to achieve the final concentrations shown below. Use appropriate screw-cap glass light-sensitive containers for storage containers. [Tables 8](#) and [9](#) show the concentrations required for the unlabeled 17 β -estradiol standard curve. (Note that the 1 μ M concentration of unlabeled 17 β -estradiol should not be considered part of the standard curve when analyzing and plotting the data. Because this concentration is the highest concentration of non-labelled 17 β -estradiol in the assay and thus the binding in this well is the indicator of the degree of non-specific binding (NSB) at the single concentration of labeled 17 β -estradiol used in the competitive binding assay, this concentration is distinguished by the label “NSB” in [Table 9](#) even though it is also part of the standard curve.)

Control: Weak Binder

The final concentration range to test for the weak binder (norethynodrel or norethindrone) is from 3 nM to 30 μ M (-8.5[logM] to -4.5[logM]), spaced as shown in [Table 10](#) and [Table 11](#) (-4.5[logM], -5[logM], -5.5[logM], -6[logM], -6.5[logM], -7[logM], -7.5[logM], -8.5[logM]).

Control: Non-binder

The final concentration range to test for the non-binder (DBP) is from 0.1nM to 100 μ M (-10[logM] to -4[logM]), in log increments. Steps to prepare DBP are described below. Note; The maximum solubility of DBP in the assay has been demonstrated to be -4[logM]). The maximum solubility of the alternate non-binder, octyltriethoxysilane, has been shown to be -3[logM].

Solvent Control (Total Binding)

The solvent control contains all of the assay components except the test

compound with the highest concentration of solvent used in the assay (i.e., non-labeled E₂, radiolabeled E₂, assay buffer and all other assay components including the solvent). When choosing a solvent, ethanol should always be the first choice followed if necessary by DMSO¹. If the test compound is known from previous information to be insoluble in ethanol at the level required for this assay, the reference for that information should be reported; the assay does not have to be run using ethanol. The solvent should be tested at the highest concentration that is used with the test compound. The maximum % of ethanol allowed is 2% (including 0.5% contained in the assay buffer). The maximum % of DMSO allowed in assay wells is 2%. These limits are placed on solvent concentration because of known interference of higher solvent concentrations with the assay.

Buffer Control

The buffer control contains neither solvent nor test compound. It contains all of the other components of the assay, brought to the final reaction volume. The results for the buffer control are compared to the solvent control to verify that the solvent used does not affect the assay system.

Test Compound

The final concentrations for the test compound range from 0.1 nM to 1 mM (10[logM] to -3[logM]), in log increments. Prepare standard curves for 17 β -estradiol, DBP, and norethynodrel (or norethindrone) in ethanol, unless the test compound requires a different solvent. In such a case, prepare standard curves for the controls in the same solvent used to dilute the test compound.

¹ Note that the solvent used for a test compound must also be used for the reference estrogen (non-labeled 17 β -estradiol) and the control chemicals (norethynodrel/norethindrone and DBP) for each run. That is, if the test compound is run in DMSO, the reference estrogen and controls must be run in DMSO; if the test compound is run in ethanol, the reference estrogen and controls must also be run in ethanol. The examples in this section of the protocol assume that the solvent being used is ethanol.

10.3.1.1 Reference Estrogen: Unlabeled 17 β -Estradiol

The unlabeled 17 β -estradiol concentrations to be used for the standard curve are 100 nM to 10 pM (-7[logM], -8[logM], -8.5[logM], -9[logM], -9.5[logM], -10[logM], -11[logM]).

- Make a fresh stock solution (10 mM): weigh out 13.62 mg of 17 β -estradiol (M.W. 272.4) in a 5.00 mL volumetric flask, dissolve and bring final volume to 5.00 mL with absolute ethanol, final concentration = 2.724 mg/mL (10 mM). Mix well. Make a secondary stock (Stock A) by pipetting 1 mL of the 10 mM stock and mixing with 9 mL absolute ethanol in an appropriate glass vial, final concentration = 0.2724 mg/mL (1000 μ M). Prepare a further stock (Stock B) by pipetting 1 mL of the 1000 μ M stock and mixing with 9 mL absolute ethanol in an appropriate glass vial, final concentration = 0.02724 mg/mL (100 μ M).

As shown in [Table 8](#), create a series of dilutions in ethanol to make the appropriate dilutions for Column A of [Table 9](#). Once Stock B is made, perform a series of 1:10 dilutions to obtain the 10 μM , 1 μM , 100 nM, 10 nM and 1 nM stocks for Column A. Similarly, use the 1 μM stock and perform a 3:10 dilution to obtain the 300 nM stock in Column A. Following this, perform a 1:10 dilution of the 300 nM stock to obtain the 30 nM stock for Column A.

Table 11. Preparation of Non-labeled 17 β -Estradiol Dilutions in Ethanol

<i>Stock</i>	<i>Dilutions for Column A, Table 9</i>
100 μM (Stock B)	100 μM
100 μM (1:10 dilution)	10 μM
10 μM (1:10 dilution)	1 μM
1 μM (3:10 dilution)	300 nM
1 μM (1:10 dilution)	100 nM
300 nM (1:10 dilution)	30 nM
100 nM (1:10 dilution)	10 nM
10 nM (1:10 dilution)	1 nM

Table 12. Concentrations of Unlabeled 17b-Estradiol Standard Curve

<i>Concentration (serial dilution in ethanol)</i> Column A	<i>Volume of serial dilution to add for diluted concentration</i> Column B	<i>Buffer to bring to final volume</i> Column C	<i>Final volume of diluted 17β- estradiol</i> Column D	<i>Well # for initial 17β-estradiol concentration in Column F</i> Column E	<i>Diluted 17β -estradiol concentration</i> Column F	<i>*Final 17β- estradiol concentration in hrERα assay well</i> Column G
0	--	--	--	Negative	0 (DBP)	0
0	--	--	--	Zero	0 (EtOH)	0
100 μ M	50 μ L	2.45 mL	2.5 mL	S0 (NSB)	2 μ M	1 μ M (10^{-6} M)
10 μ M	50 μ L	2.45 mL	2.5 mL	S1	200 nM	100 nM (10^{-7} M)
1 μ M	50 μ L	2.45 mL	2.5 mL	S2	20 nM	10 nM (10^{-8} M)
300 nM	50 μ L	2.45 mL	2.5 mL	S3	6 nM	3 nM ($\sim 10^{-8.5}$ M)
100 nM	50 μ L	2.45 mL	2.5 mL	S4	2 nM	1 nM (10^{-9} M)
30 nM	50 μ L	2.45 mL	2.5 mL	S5	600 pM	300 pM ($\sim 10^{-9.5}$ M)
10 nM	50 μ L	2.45 mL	2.5 mL	S6	200 pM	100 pM (10^{-10} M)
1 nM	50 μ L	2.45 mL	2.5 mL	S7	20 pM	10 pM (10^{-11} M)

*80 μ L of the stock dilutions in Column F will be added to the 96 well microtiter plate wells to a final volume of 160 μ L (i.e., a 1:2 dilution) and a corresponding final concentration as indicated in Column G.

- Make serial dilutions: The stock concentrations of 17 β -estradiol concentrations in Column A of Table 9 should be prepared in ethanol and these dilutions diluted further with assay buffer to achieve the final concentrations shown in Column F. 80 μ L of the respective final concentrations of 17 β -estradiol shall be added to each assay well (in triplicate) to bring the final assay volume to 160 μ L, and to provide a full dose response curve for the standard competitive binding curve (reflected in Column G). The NSB wells each contain a final concentration of 1 μ M 17 β -estradiol (the S0 wells), and are used later to subtract the NSB from each dose tested in the assay.

10.3.1.2 Weak Binder Control: Norethynodrel (Note: Preparations for the alternate weak binder (Norethindrone) are not included here.)

The required doses for norethynodrel include: 30 μ M to 3 nM (or - 4.5[logM], -5[logM], -5.5[logM], -6[logM], -6.5[logM], -7[logM], - 7.5[logM], -8.5[logM]).

- Prepare 10 mM of norethynodrel solution in absolute ethanol. Accurately weigh out 14.92 mg of norethynodrel (MW = 298.4) into 5 mL of absolute ethanol. Mix well to ensure that the norethynodrel is fully dissolved. The concentration of this solution (NE_A) is 10 mM.
- As shown in Table 10, create a series of dilutions in ethanol to make the appropriate dilutions for Column A of Table 13.

Table 13. Preparation of Norethynodrel Dilutions in Ethanol

<i>Stock</i>	<i>Dilution for Column A, Table 14</i>
10 mM (Stock NE_A)	
10 mM (3:10 dilution)	3 mM
10 mM (1:10 dilution)	1 mM
3 mM (1:10 dilution)	300 μ M
1 mM (1:10 dilution)	100 μ M
300 μ M (1:10 dilution)	30 μ M
100 μ M (1:10 dilution)	10 μ M
30 nM (1:10 dilution)	3 μ M
3 μ M (1:10 dilution)	0.3 μ M

- Once Stock NE_EtOH is made, perform a series of 1:10 dilutions to obtain the 100 and 10 μ M stocks for Column A. Similarly, use the 10 mM stock and perform a 3:10 dilution to obtain the 3 mM stock in Column A. Following this, perform 1:10 dilutions of the 3 mM stock to obtain the 300, 30, 3, and 0.3 μ M stocks for Column A.

The stock concentrations of norethynodrel in Column A above and below should be prepared in ethanol and these dilutions diluted further with assay buffer to achieve the final concentrations shown in Column F of Table 11.

Table 14. Concentrations of Norethynodrel Dilutions

Tube #	Concentration (Serial dilution in ethanol)	Volume of serial dilution to add for diluted concentration	Buffer to bring to final volume	Final volume of diluted Norethynodrel	Well # for Initial Norethynodrel Concentration in Column F	Diluted Norethynodrel Concentration	*Final Norethynodrel Concentration in hrERa assay well
	<i>Column A</i>	<i>Column B</i>	<i>Column C</i>	<i>Column D</i>	<i>Column E</i>	<i>Column F</i>	<i>Column G</i>
1	3 mM	50 µL	2.45 mL	2.5 mL	**WP1	60 µM	30 µM (~10 ^{-4.5} M)
2	1 mM	50 µL	2.45 mL	2.5 mL	WP2	20 µM	10 µM (10 ⁻⁵ M)
3	300 µM	50 µL	2.45 mL	2.5 mL	WP3	6 µM	3 µM (~10 ^{-5.5} M)
4	100 µM	50 µL	2.45 mL	2.5 mL	WP 4	2 µM	1 µM (10 ⁻⁶ M)
5	30 µM	50 µL	2.45 mL	2.5 mL	WP 5	600 nM	300 nM (~10 ^{-6.5} M)
6	10 µM	50 µL	2.45 mL	2.5 mL	WP 6	200 nM	100 nM (10 ⁻⁷ M)
7	3 µM	50 µL	2.45 mL	2.5 mL	WP 7	60 nM	30 nM (~10 ^{-7.5} M)
8	0.3 µM	50 µL	2.45 mL	2.5 mL	WP 8	6 nM	3 nM (~10 ^{-8.5} M)

*80 µL of the stock dilutions in Column F will be added to the 96 well microtiter plate wells to a final volume of 160 µL (i.e., a 1:2 dilution) and a corresponding final concentration as indicated in Column G.

** WP = Weak positive, corresponds to the fields in the sample plate layout in [Appendix C](#).

10.3.1.3 Non-binder Control: DBP (or alternate, octyltrisilane)

The required concentrations for DBP include: 100 μ M to 0.1 nM (-4[logM], -5[logM], -6[logM], -7[logM], -8[logM], -9[logM], -10[logM]). The range of octyltrisilane concentration may vary from 1mM to 0.1 nM. Dilutions may be prepared using similar dilutions as described for DBP.

- Prepare 100 mM of DBP solution in absolute ethanol. Accurately weigh out 27.84mg of DBP (MW = 278.34) into a final volume of 1 mL of absolute ethanol. Mix well to ensure that the DBP is fully dissolved. The concentration of this solution (DBP_A) is 100 mM.
- Prepare 10 mM of DBP solution (DBP_B) by diluting 100 μ L of DBP_A into 900 μ L of absolute ethanol.
- Perform a series of 1:10 dilutions to obtain -3[logM], -4[logM], -5[logM], -6[logM], -7[logM], -8[logM] stocks for Column A (see Table 12 below) that will be used to prepare the dilutions (Column F) and the desired final concentrations in the assay wells (Column G).
- The stock concentration of DBP_B in Column A below should be prepared in ethanol, and these dilutions diluted further with assay buffer to achieve the final concentrations shown in Column F of Table 12.

Table 15. Concentrations for DBP Dilutions

	<i>Concentration (serial dilution in ethanol)</i>	<i>Volume of serial dilution to add for diluted concentration</i>	<i>Buffer to bring to final volume</i>	<i>Final volume of diluted DBP</i>	<i>Tube # for initial DBP concentration in Column F</i>	<i>Diluted DBP concentration (molar)</i>	<i>*Final DBP concentration in hrERa assay well (molar)</i>
	<i>Column A</i>	<i>Column B</i>	<i>Column C</i>	<i>Column D</i>	<i>Column E</i>	<i>Column F</i>	<i>Column G</i>
1	10 mM (stock)^	50 μ L	2.45 mL	2.5 mL	**DBP1	2×10^{-4} (200 μ M)	1×10^{-4} (100 μ M)
2	1 mM (DBP1)	50 μ L	2.45 mL	2.5 mL	DBP2	2×10^{-5} (20 μ M)	1×10^{-5} (10 μ M)
3	100 μ M (DBP2)	50 μ L	2.45 mL	2.5 mL	DBP3	2×10^{-6} (2 μ M)	1×10^{-6} (1 μ M)
4	10 μ M (DBP3)	50 μ L	2.45 mL	2.5 mL	DBP4	2×10^{-7} (200 nM)	1×10^{-7} (100 nM)
5	1 μ M (DBP4)	50 μ L	2.45 mL	2.5 mL	DBP5	2×10^{-8} (20 nM)	1×10^{-8} (10 nM)
6	100 nM (DBP5)	50 μ L	2.45 mL	2.5 mL	DBP6	2×10^{-9} (2 nM)	1×10^{-9} (1 nM)
7	10 nM (DBP6)	50 μ L	2.45 mL	2.5 mL	DBP7	2×10^{-10} (0.2 nM)	1×10^{-10} (0.1 nM)

^DBP_B is the 10 mM stock to be used for the serial dilutions.

*80 μ L of the stock dilutions in Column F will be added to the 96 well microtiter plate wells to a final volume of 160 μ L (i.e., a 1:2 dilution) and a corresponding final concentration as indicated in Column G.

**DBP = Dibutyl phthalate, corresponds to the appropriate field in the sample plate-layout in [Appendix C](#).

10.3.1.4 Solvent and Buffer Controls

- To demonstrate that the solvent used does not affect the assay system, the solvent control should be tested with each experiment (i.e., each day an assay is run).
- Only the highest concentration of solvent need be tested. The maximum concentration of ethanol in the final assay wells is 1.5% and shall not exceed 2%. These wells also serve as the Total Binding (TB) wells. When DMSO is required, it is routinely used at 2.05% but may be used as high as 2.5%.
- Prepare a buffer control (BC) that contains neither solvent nor test compound. It contains all of the other components of the assay, brought to the final reaction volume. The results of the buffer control are compared to the solvent control to verify that the solvent used does not affect the assay system.

10.3.2 Preparation of Test Compounds

Instructions for preparing compounds for testing in the competitive binding assay are provided in this section.

10.3.2.1 Overview of test compound preparation

Test compounds should be tested using log dose spaced curves with 8 concentrations ranging from 10^{-10} to 10^{-3} M, unless justification for alternate dose spacing is made. Prepare each dilution in the appropriate solvent to yield the final concentrations as indicated below. Visually inspect the test compound stock solution (use a light box or dissecting microscope, if available) to confirm that there are no crystallization products or precipitates prior to making the dilutions. It may be necessary to warm the stock solution of the test compound for 10 – 15 minutes in a 36°C water bath before making the dilutions. Make sure that the test compound is amenable to warmth and light (i.e., it does not degrade under these conditions) before preparing the stock solution and serial dilutions using the techniques described above. In addition, it is important that solutions be closely monitored when added to the assay well as the test compound may precipitate upon addition to the assay well.

Note: For the purpose of screening, an upper limit of 1 mM and a range from 1 mM to 100 pM, in ten-fold increments is acceptable. If the highest concentration cannot be prepared in either ethanol or DMSO (e.g., because there is precipitate in the stock solution, and adding more solvent would cause the solvent concentration in the final tube to be greater than the acceptable limit), that concentration may be omitted as long as the justification is included in the report. Other concentrations in the series should remain unchanged (viz., log-spaced on the powers of ten). If the highest concentration is omitted, an additional concentration may optionally be added at the low end of the concentration series. As few

concentrations as possible should be omitted from the high-concentration end of the series in order to obtain a fully-solubilized stock solution. Evidence must be provided in the report showing measures taken at each highest-concentration attempted to obtain full solubility.

It is possible that a test compound will be dissolved in the stock solution but will precipitate in the final assay microtiter well in the presence of the other reagents. Each assay well should therefore be inspected carefully. If precipitate is noted, continue with the assay. However, be sure to exclude the data for all wells that contain precipitate from curve-fitting, and note the reason for exclusion of the data.

Finally, it is possible that the test compound is not fully soluble in the final assay well but that the precipitate was not detected by visual inspection. For compounds that interact with the hrER, this might result in a U-shaped binding curve. Guidance on how to recognize and deal with U-shaped curves is given in [Section 10.6.6](#).

If there is prior existing information from other sources that provide a $\log(\text{IC}_{50})$ of a test chemical, it may be appropriate to space the dilutions more closely (but geometrically) around the expected $\log(\text{IC}_{50})$ concentration rather than to test concentrations that must be assumed to be extreme. Thus, the spacing of concentrations to test may depart from the default stated above if appropriate justification is given and the information supporting the initial estimate of the $\log(\text{IC}_{50})$ is included in the report. In any case, the results must show that enough points on either side of the $\log(\text{IC}_{50})$ were included such that the full binding curve, including the “top” and “bottom”, can be adequately characterized.

10.3.2.2 Test Compound Concentrations

- 1) To make the stock test compound concentration calculate the grams of chemical needed to make a 100 mM stock. For example: if the molecular weight of the test compound is X g/mole, then 1 M = X g/L, and 100 mM = (X/10) g/L = 0.X g/L. The volume can be adjusted to make a smaller amount of test compound.
- 2) Once a stock concentration of test compound is made (for this example we use 100 mM, but this may change depending on the chemical used), follow the dilutions in Table 13 to make the serial dilutions of test compound for the assay. The first dilution will need to be altered if the stock concentration is not 100 mM, but the rest of the dilutions should remain the same once the greatest concentration of test compound to be used in the assay is defined.
- 3) The solvent used for the following dilutions shall follow the protocol in Section 10.3.2.1 above, using ethanol as the preferred solvent. If the highest concentration is not soluble in ethanol,

DMSO may be tried next. Only if neither of these solvents work may the highest concentration be reduced to the next lower concentration. Reminder: the concentration of ethanol in the final assay volume may not exceed 2%; the final volume of DMSO, if used, may not exceed 2%.

- 4) Add 80 μ L of test compound dilutions (TC 1-7 tubes) to the respective assay wells to obtain competitive binding curves as described in [Section 10.3.1](#).

See table below.

Table 16. Concentrations of Test Chemicals

	<i>Concentration (serial dilution in ethanol)</i>	<i>Volume of serial dilution to add for diluted concentration</i>	<i>Buffer to bring to final volume</i>	<i>Final volume of diluted test compound</i>	<i>Well # for initial test compound concentration in Column F</i>	<i>Diluted test compound concentration (molar)</i>	<i>*Final test compound concentration in hrERa assay well (molar)</i>
	<i>Column A</i>	<i>Column B</i>	<i>Column C</i>	<i>Column D</i>	<i>Column E</i>	<i>Column F</i>	<i>Column G</i>
1	100 mM (stock)^	50 µL	2.45 mL	2.5 mL	TC1	2×10^{-3} (2mM)	1×10^{-3} (1mM)
2	10 mM (TC1)	50 µL	2.45 mL	2.5 mL	TC2	2×10^{-4} (200 µM)	1×10^{-4} (100 µM)
3	1 mM (TC2)	50 µL	2.45 mL	2.5 mL	TC3	2×10^{-5} (20 µM)	1×10^{-5} (10 µM)
4	100 µM (TC3)	50 µL	2.45 mL	2.5 mL	TC4	2×10^{-6} (2 µM)	1×10^{-6} (1 µM)
5	10 µM (TC4)	50 µL	2.45 mL	2.5 mL	TC5	2×10^{-7} (200 nM)	1×10^{-7} (100 nM)
6	1 µM (TC 5)	50 µL	2.45 mL	2.5 mL	TC6	2×10^{-8} (20 nM)	1×10^{-8} (10 nM)
7	100 nM (TC6)	50 µL	2.45 mL	2.5 mL	TC7	2×10^{-9} (2 nM)	1×10^{-9} (1 nM)
8	10 nM (TC7)	50 µL	2.45 mL	2.5 mL	TC8	2×10^{-10} (0.2 nM)	1×10^{-10} (0.1 nM)

^ It may be necessary to change the stock concentration depending on the properties of the test compound.

*Final Concentration of test compound in assay well when 80 µL of Initial Concentration is used in a total volume of 160 µL.

10.4 Preparation of Competitive Binding Assay Microtiter Plates

Label microtiter plates considering triplicate incubations with codes for the solvent control, the nonspecific binding (NSB), the non-binding control (e.g., DBP), seven concentrations for the reference estrogen (in addition to the highest concentration which also serves as the nonspecific binding indicator), eight concentrations dose levels of the weak binder substance, and eight concentrations of each test compound (TC). An example of a competitive assay microtiter plate -layout worksheet using three unknown test compounds is provided in [Appendix C](#). A sample layout of the standards plate is given below in Table 14. The first six blank wells in the sample layout below represent the “hot” wells in the plate layout for radioactive measurement in Table 16. Please note that the radioactive estradiol dilution determined for the assay in section 10.2.2 must be re-counted here to demonstrate that the dilution is within 6% of the nominal concentration and to provide values for use in the data analysis.

Table 17. Sample Competitive Binding Assay Microtiter Plate Layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	TB (Solvent only)			TB (Solvent only)			NSB			NSB		
B	$E_2 (1 \times 10^{-7})$			$E_2 (1 \times 10^{-8})$			$E_2 (1 \times 10^{-8.5})$			$E_2 (1 \times 10^{-9})$		
C	$E_2 (1 \times 10^{-9.5})$			$E_2 (1 \times 10^{-10})$			$E_2 (1 \times 10^{-11})$			blank		
D	$NE (1 \times 10^{-4.5})$			$NE (1 \times 10^{-5})$			$NE (1 \times 10^{-5.5})$			$NE (1 \times 10^{-6})$		
E	$NE (1 \times 10^{-6.5})$			$NE (1 \times 10^{-7})$			$NE (1 \times 10^{-7.5})$			$NE (1 \times 10^{-8.5})$		
F	blank			$TC (1 \times 10^{-4})$			$TC (1 \times 10^{-5})$			$TC (1 \times 10^{-6})$		
G	$TC (1 \times 10^{-7})$			$TC (1 \times 10^{-8})$			$TC (1 \times 10^{-9})$			$TC (1 \times 10^{-10})$		
H	blank (for hot)			blank (for hot)			Buffer control			Buffer control		

10.4.1 Contents of Each Well

According to the layout in Table 14, add the following components to each well:

- 1) Prepare the solvent control, buffer control, standard, weak standard, negative, and test compounds as described in assay buffer and add to the wells (80 μ L).
- 2) Then add 40 μ l of the 4 nM [^{3} H]-17 β -estradiol solution to each well.
- 3) Allow to gently rotate for 10 to 15 minutes at 4°C (range 2° to 8°C).

- 4) Finally add 40 μL of hrER α solution prepared immediately prior to use. Concentration is as determined (see section 10.2.3). (See Table 15 below).

Table 18. Volume of Assay Components for hrER Competitive Binding Assay, Microtiter Plates

<i>Volume (μL)</i>	<i>Constituent</i>
80	Unlabeled 17 β -estradiol, norethynodrel, non-binder control, test compound, solvent or buffer
40	4 nM [^3H]-17 β -estradiol solution
40	hrER α solution, concentration as determined (see section 10.2.3).
160	<i>Total volume in each assay well</i>

- 5) Incubate microtiter plates at 2° to 8°C for 16 to 20 hours. Microtiter plates should be placed on a rotator during the incubation period.

10.5 Completion of Competitive Binding Assay

After incubation of the microtiter plates, complete the competitive binding assay following the steps below.

10.5.1 Preparation of 5% DCC Suspension

To prepare 25 mL of the charcoal slurry, suspend 1.25 g charcoal in a glass flask with 25 mL assay buffer (prepared on the 1st day of the assay and kept at 2° to 8°C). Always make a new batch of DCC solution before each run and use immediately. Place a stir bar in the flask and stir thoroughly on a magnetic stir plate for at least 3 minutes before use. The 25 mL volume prepared is sufficient for processing 300 assay wells, or about three 96-well microtiter plates. If more than 3 plates are used per run, adjust the amount of DCC prepared accordingly. Stir the slurry when drawing samples.

10.5.2 Separation of [^3H]-17 β -Estradiol Bound to hrER α from Free [^3H]-17 β -Estradiol

***Note:** To minimize dissociation of bound [^3H]-17 β -estradiol from the hrER α during this process, it is extremely important that the buffers and assay wells be kept ice-cold and that each step be conducted quickly. A shaker for microtiter plates is necessary to process plates efficiently and quickly.*

- Remove hrER α assay microtiter plates from the 2° to 8°C incubation. Using a repeating pipette, quickly add 80 μL of cold DCC suspension to each well.
- Place the hrER α assay microtiter plates on the shaker at 2° to 8°C and shake for 10 minutes. Then centrifuge the microtiter plate at 4°C (range 2° to 8°C) for 10 minutes at about 2,500 RPM.

- After centrifugation, the separation of the free [³H]-17β-estradiol and hrERα bound [³H]-17β-estradiol has been completed.

10.5.3 Extraction and Quantification of [³H]-17β-Estradiol Bound to hrERα

- Immediately after the centrifugation step, pipet 50 μL aliquots of the supernatants containing the hrERα-bound [³H]-17β-estradiol into a second microtiter plate. (**Assure that the material of this plate is resistant to the scintillation cocktail.**) Pipetting is most rapidly and conveniently done using a multi-channel pipet. **Be EXTREMELY careful not to contaminate your aliquot by touching or accidentally pipetting any DCC with the supernatant aliquot!!**
- Note that the wells H1-H6 (identified as hot) represent the dpms of the [³H]-labeled-estradiol in 40 μL. The 40 μL aliquot should be delivered directly into the scintillation fluid in wells H1 – H6, as indicated in Table 16.

Table 19. Sample Competitive Binding Assay Microtiter Plate Layout, Radioactivity Measurement

	1	2	3	4	5	6	7	8	9	10	11	12
A	TB (Solvent only)			TB (Solvent only)			NSB			NSB		
B	E ₂ (1×10 ⁻⁷)			E ₂ (1×10 ⁻⁸)			E ₂ (1×10 ^{-8.5})			E ₂ (1×10 ⁻⁹)		
C	E ₂ (1×10 ^{-9.5})			E ₂ (1×10 ⁻¹⁰)			E ₂ (1×10 ⁻¹¹)			blank		
D	NE (1×10 ^{-4.5})			NE (1×10 ⁻⁵)			NE (1×10 ^{-5.5})			NE (1×10 ⁻⁶)		
E	NE (1×10 ^{-6.5})			NE (1×10 ⁻⁷)			NE (1×10 ^{-7.5})			NE (1×10 ^{-8.5})		
F	blank			DBP (1×10 ⁻⁴)			DBP (1×10 ⁻⁵)			DBP (1×10 ⁻⁶)		
G	DBP (1×10 ⁻⁷)			DBP (1×10 ⁻⁸)			DBP (1×10 ⁻⁹)			DBP (1×10 ⁻¹⁰)		
H	Hot			Hot			Buffer control			Buffer control		

- Add 200 μL of scintillation cocktail to each well. Be sure that the cocktail has a high capacity to take up water and is suitable for use according to the type of plate reader being used—see directions specific to your individual plate reader for more information.

Note: Since a 50 μL aliquot is used for scintillation counting, the dpms should be adjusted to account for the total radioactivity in 240 μL (i.e., $\text{dpms}/50 \mu\text{L} \times 4.8 = \text{Total dpms bound in experiment}$). Total dpms are directly used and do not need adjustment for volume.

- Place vials in microtiter plate scintillation counter for determination of dpm/vial with quench correction. Start measurement with a delay of at least 2 hours. Counting time is 20 minutes per well.

***Note:** If a scintillation counter for a microtiter plate is not available, samples may be measured in a conventional counter. Under these conditions, a reduction of counting time may be considered. 20 mL LSC vials with a minimum of 10 mL cocktail should be used.*

10.6 Data Analysis

10.6.1 Terminology

- **Total [³H]-17 β -estradiol:** Radioactivity in dpms added to each assay well (e.g., can be converted to concentration of total [³H]-17 β -estradiol).
- **Total (Maximum) Binding (TB):** Radioactivity in dpms in the zero (solvent control) standard wells (e.g., in [Appendix C](#)).
- **Nonspecific Binding (NSB):** Radioactivity in dpms in the NSB standard (the concentration of unlabeled 17 β -estradiol tested for NSB is 1 μ M.)
- **Specific Binding:** Radioactivity in dpms for each concentration of standard or test compound minus the mean dpm of the NSB wells (i.e., total binding minus the nonspecific binding).

10.6.2 Approach to Competitive Binding Assay Analysis

This protocol for the competitive assay is optimized to detect chemicals with the potential to interact with the full length hrER α . This assay can be used as a screen or can be further developed for use in modeling activities. The Organisation for Economic Co-operation and Development (OECD) member groups involved in the validation study for this assay have different needs for its use. For example, the US EPA's Endocrine Disruptor Screening Program (EDSP) intends to use the hrER competitive binding assay to evaluate the potential of a test compound to interact with the endocrine system. The EDSP is less concerned with proving that the interaction is, specifically, one-site competitive binding, or with accurately characterizing the strength of the binding. Nevertheless, a certain amount of quantitative analysis is necessary to ensure that the assay has been run correctly, and to aid in classifying a test compound as positive for binding, negative, or equivocal.

Other OECD member groups may develop this assay for other purposes. For example, for pre-screening of hormonal activity of chemicals and the study of the structural requirements of both chemical and receptor structures for their interactions (i.e., Structure-Activity-Relationship (SAR) research) as described by the Japanese group at the Chemicals Evaluation Research Institute (CERI), Japan, one of the OECD member groups involved in this validation.

The following paragraphs describe issues to consider when using this assay to screen compounds for their potential to interact with the endocrine system.

***Note:** The classification of a substance as a binder or non-binder for screening purposes might not be appropriate for SAR analyses or other analyses where stringent classification as a one-site competitive binder may be necessary. Similarly, the “Relative Binding Affinities” estimated by this assay may not be appropriate for SAR analyses because the nature of the interaction has not been fully characterized.*

This hrER α competitive binding assay measures the binding of a single concentration of [^{3} H]-17 β -estradiol in the presence of increasing concentrations of a test compound. The competitive binding curve is plotted as specific [^{3} H]-17 β -estradiol binding versus the concentration ($\log_{10}$ units) of the competitor. The concentration of the test compound that inhibits 50% of the maximum specific [^{3} H]-17 β -estradiol binding is the IC $_{50}$ value.

10.6.3 Data Analysis for the Reference Estrogen and Weak Binder. Data from each run should be entered into the Excel Data Entry Worksheet (Appendix D). Transformed data (e.g., percent [^{3} H]-17 β -estradiol specific binding, and log concentration of the control chemical) are generated for further analysis. Estimates of log(IC $_{50}$) values for the positive controls (e.g., reference estrogen and weak binder) should be determined using an appropriate nonlinear curve fitting software to fit a four parameter Hill equation (e.g., BioSoft; McPherson, 1985; Motulsky, 1995). The top, bottom, slope, and log(IC $_{50}$) should generally be left unconstrained when fitting these curves. Robust regression should be used when determining the best fit unless justification is given. The method chosen for robust regression should be stated. Correction for ligand depletion should not be used. Following the initial analysis, each binding curve should be reviewed to ensure appropriate fit to the model. The relative binding affinity (RBA) for the weak binder should be calculated as a percent of the log (IC $_{50}$) for the weak binder relative to the log (IC $_{50}$) for 17 β -estradiol. Results from the positive controls and the non-binder control should be evaluated using the measures of assay performance and the performance standards in sections 10.6.4 and 10.6.5.

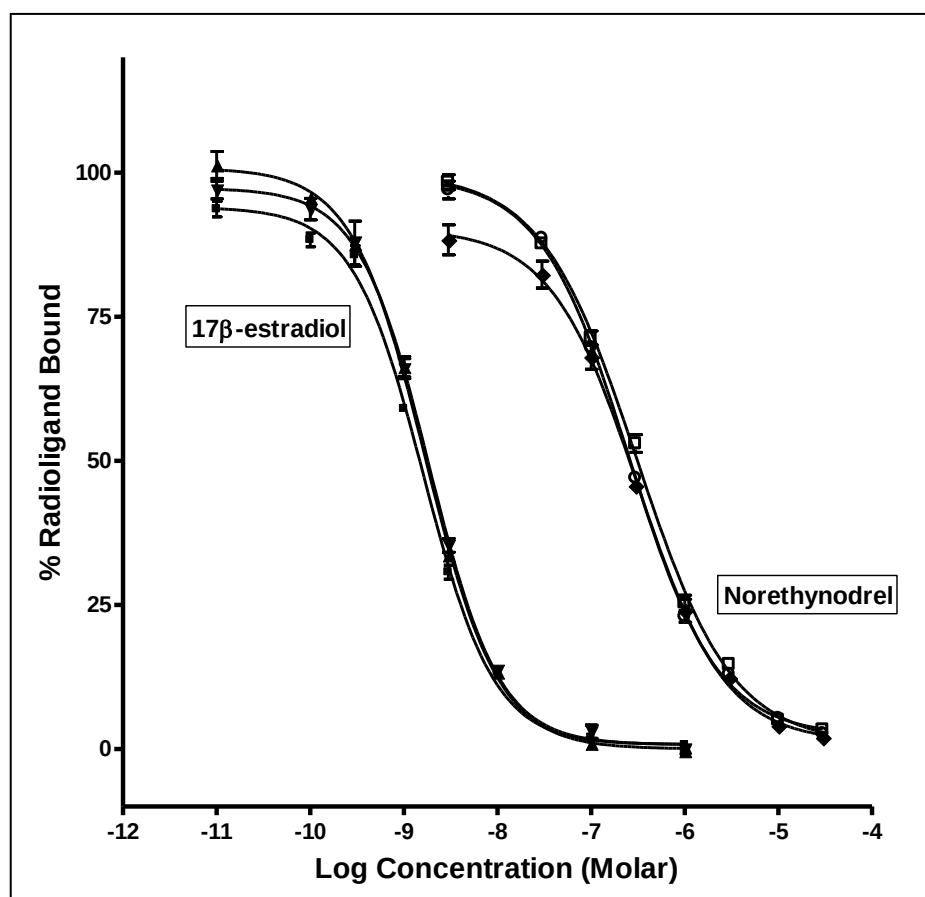
In order to ensure that the assay will provide reliable results, limits on the variability of the data points at each concentration within a run for the reference chemical and for the positive and negative controls can be set at a later time when more data are available..

10.6.4 Measures of Assay Performance for the Controls in the Competitive Binding Assay

The following measures of assay performance are provided as a general guide to evaluate results from the positive controls (e.g., reference estrogen and weak binder) and negative control (non-binder) as an indication as to whether or not the competitive binding assay is functioning correctly within each laboratory.

- Increasing concentrations of unlabeled 17β -estradiol displace [^3H]- 17β -estradiol from the receptor in a manner consistent with one-site competitive binding. The competitive binding curves for the reference estrogen and weak binder should typically descend from 90 – 10% ^3H - 17β -estradiol bound over approximately an 81-fold increase in the concentration of the positive controls (i.e., this portion of the curve will cover approximately 2 log units and the slope of the curve shall be close to -1.) Consistency among the curve fits for each positive control across multiple runs of the assay is an indication that the competitive binding assays are functioning properly. Examples of 3 runs for each positive control are shown in Figure 1.

Figure 1. Example of Competitive Binding Curves for Controls



- The IC_{50} value for reference estrogen (e.g., 17β -estradiol) is

approximately equal to the molar concentration of [^3H]-17 β -estradiol plus the K_d determined from the saturation binding assay. The K_d determined from the competitive binding assay is less reliable and should not be used here.

- *Is total specific binding consistently within the acceptable range of $20 \pm 5\%$ when the the average measured concentration of total radioactivity added to each well was 1 nM across runs?* Occasional slight excursions outside of this range are acceptable, but if runs are consistently outside this range or a particular run is significantly outside this range, the protein concentration should be adjusted.
- *The solvent control substance does not alter the sensitivity or reproducibility of the assay.* The results of the solvent control (TB wells) are compared to the buffer control to verify that the solvent used does not affect the assay system. The results of the TB and Buffer control should be comparable if there is no effect of the solvent on the assay.
- *The non-binder (DBP or octyltrisilane) does not displace more than 25% of the [^3H]-17 β -estradiol from the hrER α when tested up to 10^{-4} M.*

10.6.5 Performance Criteria for the Positive Controls

Tolerance bounds were developed for the reference estrogen and two weak binders (e.g., norethynodrel, norethindrone) using data from the validation study of the FW hrER Binding Assay. Univariate tolerance intervals to contain 80% of the population of acceptable test runs across all laboratories with 95% confidence were calculated and are provided as performance criteria for the positive controls. The tolerance bounds include estimates for the following curve fit parameters: top, bottom, Hill slope, logIC₅₀ for the reference estrogen and weak binders and for the log₁₀RBA of the weak binders relative to the reference estrogen. Table 21 provides expected ranges for the curve fit parameters that can be used as performance criteria.

Table 20. FW hrER Binding Assay, Performance Criteria for the Reference Estrogen and Weak Binders^a

Chemical	Parameter	Average Estimate	Std Error Estimate	Lower Limit	Upper Limit
	Top (%)	101.60	0.92	89.14	114.05
	Bottom (%)	0.32	0.21	-1.36	2.01
	Hill Slope	-1.02	0.04	-1.91	-0.13
	LogIC ₅₀ (M)	-8.85	0.04	-9.20	-8.50
Norethynodrel	Top (%)	101.15	2.01	76.83	125.47

Chemical	Parameter	Average Estimate	Std Error Estimate	Lower Limit	Upper Limit
	Bottom (%)	2.23	0.73	-5.42	9.89
	Hill Slope	-0.96	0.04	-2.05	0.13
	LogIC ₅₀ (M)	-6.32	0.07	-6.84	-5.80
	LogRBA	-2.54	0.08	-3.17	-1.92
Norethindrone	Top (%)	90.23	4.92	51.25	129.21
	Bottom (%)	3.33	2.07	-13.43	20.08
	Hill Slope	-1.29	0.11	-4.00	1.41
	LogIC ₅₀ (M)	-5.92	0.17	-7.45	-4.37
	LogRBA	-2.93	0.21	-4.82	-1.04

^aTolerance intervals were developed using data from the validation study for the FW hrERα Binding Assay (REF). Intervals contain at least 80% of population of test runs with 95% Confidence for Top, Bottom, Hillslope and LogIC₅₀ Parameters for the assay controls.

10.6.6 Data Analysis for Test Chemicals

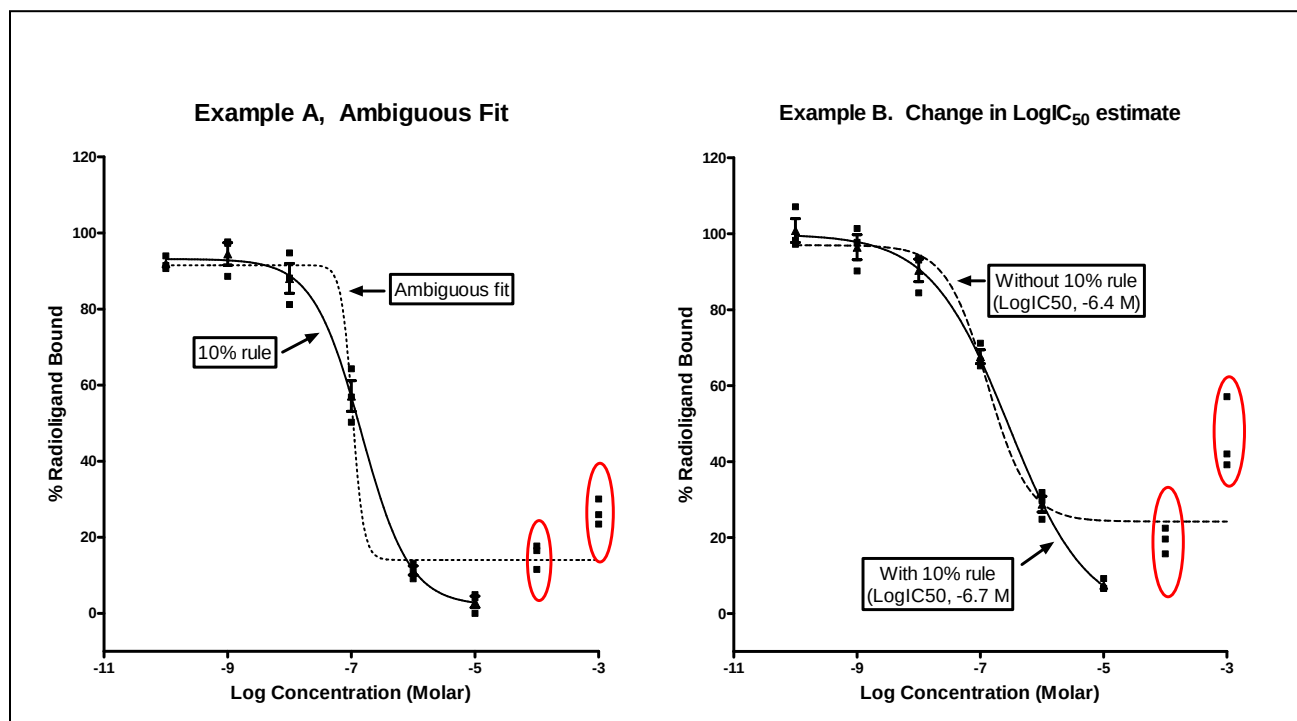
Data for all test chemicals should be analyzed using a step-wise approach to ensure that data are appropriately analyzed and that each competitive binding curve is properly classified. It is recommended that each run for a test chemical initially undergo a standardized data analysis that is identical to that used for the reference estrogen and weak binder controls (see section 10.6.3). Once completed, a technical review of the curve fit parameters as well as a visual review of how well the data fit the generated competitive binding curve for each run should be conducted. During this technical review, the observations of a concentration dependent decrease in the percent [³H]-17β-estradiol specifically bound, low variability among the technical replicates at each chemical concentration, and consistency in fit parameters among the three runs are a good indication that the assay and data analyzes were conducted appropriately. However, the following cases provide examples of data that may require additional attention in order to appropriately analyze and interpret the hrER binding data.

Case study 1. Competitive binding curves with an up-turn of percent [³H]-17β-estradiol specifically bound at high concentration of the test chemical.

Previous studies had shown cases where the analysis and interpretation of competitive receptor binding data can be complicated by an upturn of the percent specific binding when testing chemicals at the highest concentrations (Figure 2). This is an well-known issue that can be encountered when using any competitive receptor binding assays (Laws et al., 2006). In these cases, a concentration dependent response is observed at lower concentrations, but as the concentration of the test chemical approaches the limit of solubility, the displacement of

[³H]17β-estradiol begins to generate a “U-shaped response curve”. Such U-shaped curves are typically considered artifacts of the test conditions rather than relevant descriptors of the binding affinity of the test chemical. For example, U-shaped curves are many times associated with chemical insolubility and precipitation at high concentrations, or may also be a reflection of exceeding the capacity of the dextran-coated charcoal to trap the unbound radiolabeled ligand during the separation procedure at the highest chemical concentrations. Leaving such data points in when fitting competitive binding data to a sigmoid curve can inappropriately raise the perceived bottom of the curve (Figure 2B), and can sometimes lead to a misclassification of the ER binding potential for a test chemical (Figure 2A). To avoid this, the protocol for the FW hrER binding assays includes an option to exclude from the analyses all data points where the mean of the replicates for the percent [³H]17β-estradiol specific bound is 10% or more above that observed for the mean value at a lower concentration (i.e. This is commonly referred to as the 10% rule).

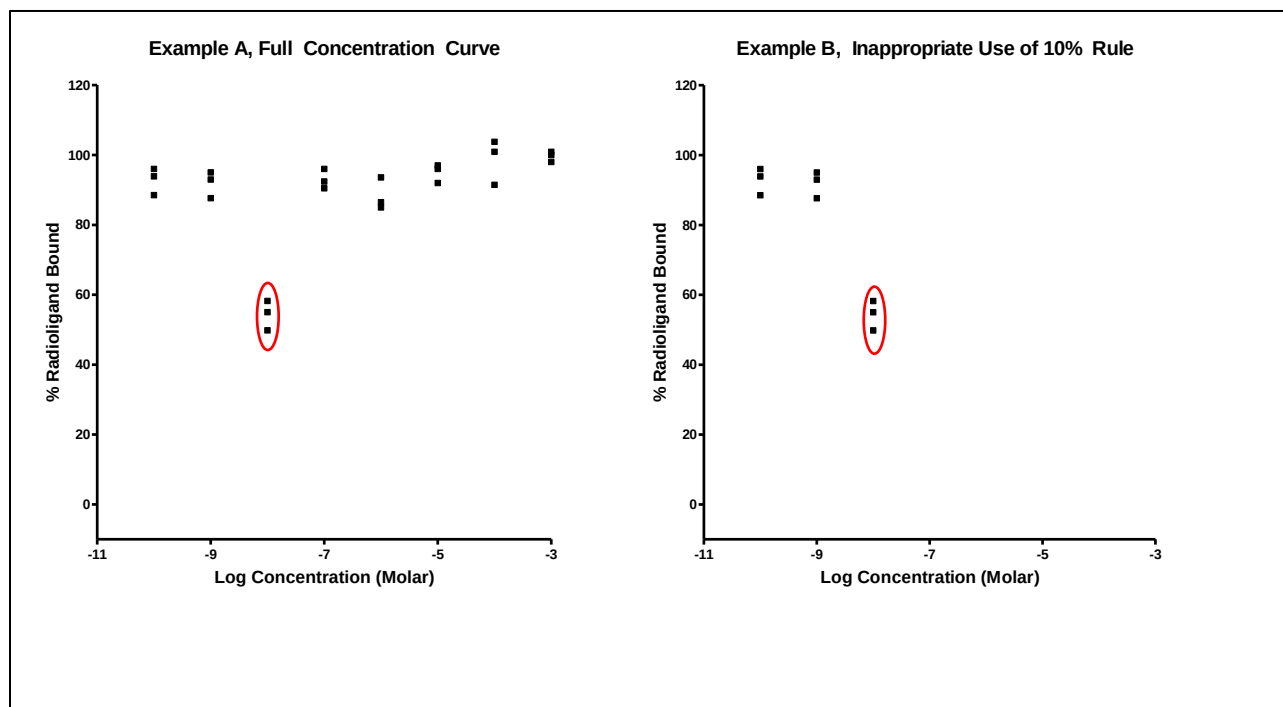
Figure 2. Examples, Competitive Binding Curves with and without Use of the 10% Rule.



The appropriate use of the 10% rule to correct U-shaped curves should be carefully considered and reserved for those cases where there is a strong indication of a hrER binder. During the conduct of experiments for the validation study of the FW hrER Binding Assay, it was observed that the 10% rule sometimes had an unintended and unforeseen consequence. Chemicals that did not interact with the receptor (i.e., true non-binders) often showed variability around 100% radioligand binding that were greater than 10% across the range of concentrations tested. If the lowest value happened to be at a low concentration, the data from all higher concentrations could potentially be deleted from the analysis by using the 10% rule, even though those concentrations could be useful in establishing that the chemical is a non-binder. Figure 3 shows an example of a case where the use of the 10% rule is inappropriate. Here when using the data interpretation criteria shown in Table

22, the test chemical would be classified as ‘equivocal’ for its ability to bind to the hrER based upon a single data point that falls just below the 75% [³H]17β-estradiol binding cut-off for the non-binders. However, in this case the data from the higher concentrations strongly support the classification as a non-binder.

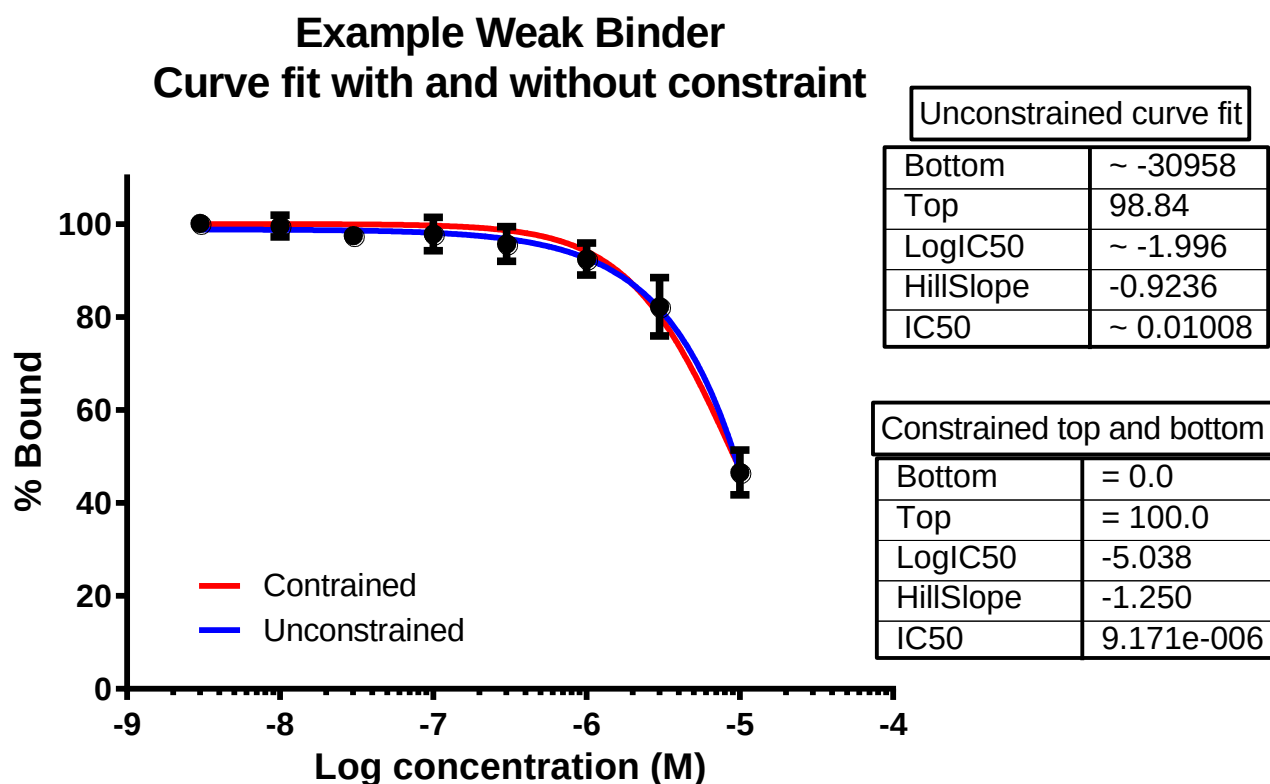
Figure 3. Example of test run where the use of 10% rule is inappropriate.



Case study 2. The need to fit the data using a constrained fit model.

The standardized analysis recommended for data from the competitive binding assay is an appropriate nonlinear curve fitting software to fit a four parameter Hill equation with unconstrained estimates for the top, bottom, slope, and log(IC₅₀) (see Section 10.6.3). While this is a conservative method for analyzing the data, it is not unusual for receptor binding curve fitting models to be constrained (e.g., Top, maximum of 100% and/or Bottom, minimum of 0%) since it is theoretically impossible for a test chemical to displace more than 100% or less than 0% of the [³H]17β-estradiol from the ER. Constraining the top and/or bottom can sometimes improve the precision of the response curves by preventing the inclusion of nonsensical estimates for the top or bottom of the curves (Figure 4). Cases where nonsensical estimates for the top or bottom of the competitive binding curves can be easily detected by reviewing the fit parameter data from each run.

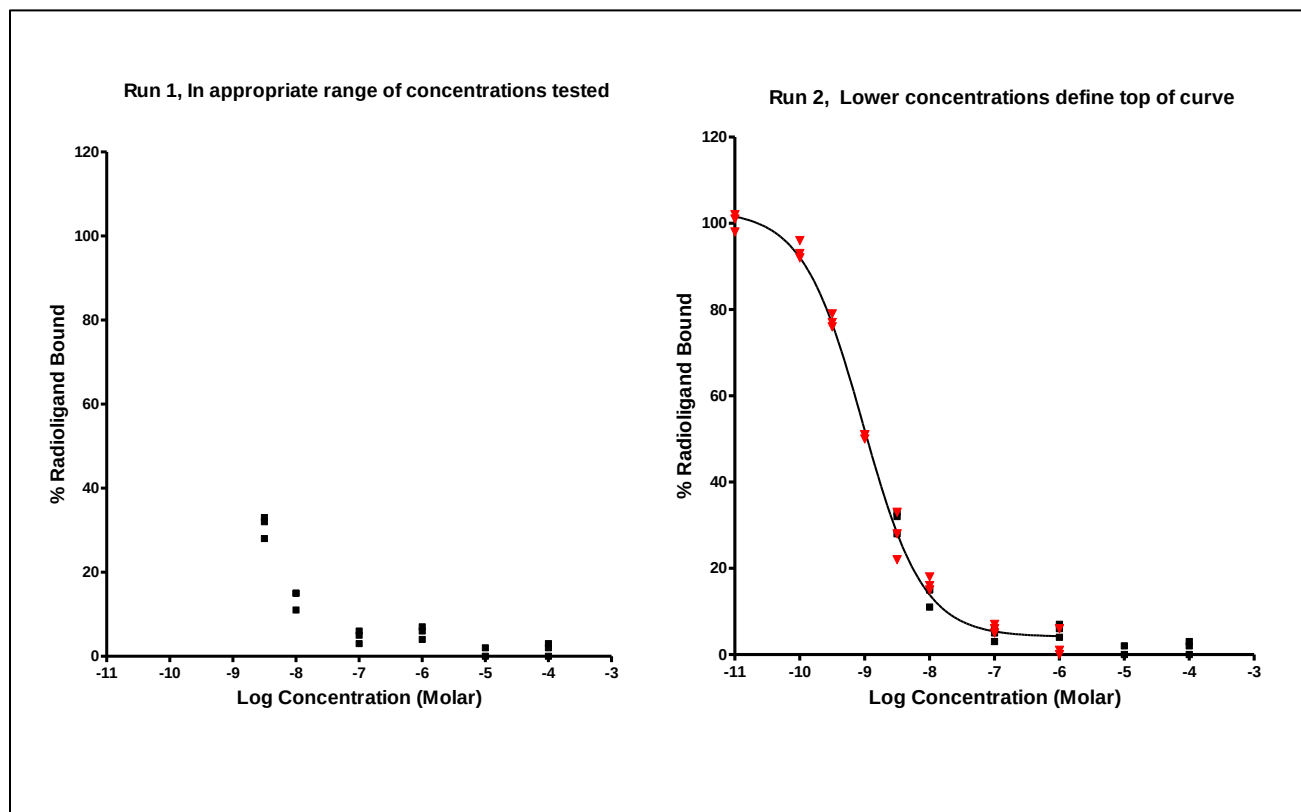
Figure 4. Comparison of curve fits using four parameter Hill equation with unconstrained and constrained estimates for the top, bottom, slope and Log (IC₅₀).



Case Study 3: Incomplete competitive binding curves: Top missing due to lack of inclusion of lower chemical concentrations or Bottom missing due to chemical solubility limitations.

The selection of the range of concentrations for test chemicals in the competitive binding assay can sometimes be challenging. Typically, the limit of solubility of a test chemical in the assay buffer dictates the highest concentration that can be evaluated in the competitive binding assay, and many times prevents an assessment of the bottom portion of the curve. This is a recognized limitation of all *in vitro* assays and guidance has been included in this protocol to address this issue (see, Section 10.3.2.1, selection of concentration range; Section 10.7. data interpretation). In other cases, the concentration range of a test chemical may not fully access the hrER binding affinity at the lower concentrations. This results in an incomplete assessment of the top of the competitive binding curve (Figure 5, Run 1). Since such data can produce an ambiguous curve fit when using the recommended standardized analysis procedure (see Section 10.6.3), it is important that this be detected during the technical review of the data analysis to prevent possibly misclassifying a hrER binder. In these cases, the competitive binding assay should be replicated using lower concentrations of the test chemical to adequately evaluate its binding capability for the hrER (Figure 5, Run 2).

Figure 5. Example of incomplete binding curves due to lack of lower concentrations for test chemical.



10.6.7. Measures of assay performance for test chemicals in the competitive binding assay.

No tolerance bounds were developed for curve fit parameters for the test chemicals because of the wide array of existing potential test chemicals and variation in potential affinities and outcomes (e.g. Full curve, partial curve, no curve fit). However, professional judgment should be applied when reviewing results from each run for a test chemical. Generally, binders are characterized by curves that begin near 100% at low test chemical concentrations and fall from approximately 80% to 20% over two log units change in concentration and asymptotically approach 0%. A sufficient range of concentrations of the test chemical should be used to clearly define the top (e.g., 90 - 100% of binding) of the competitive curve (see Section 10.6.6., Case Study 3). Variability among replicates at each concentration of test chemical as well as among the 3 non-concurrent runs should be reasonable and scientifically defensible. Controls from each run for a test chemical should meet the measures of performance with curve fit parameters within the limits of the tolerance bounds (Sections 10.6.4 and 10.6.5).

10.7. Data Interpretation, Competitive Binding Assay

10.7.1 Classification Criteria for a Test compound for hrER α Binding

Classification of a test compound is based on the results of three non-concurrent runs, each of which meets the performance criteria.

The criteria used to assign a classification for a test chemical (e.g., binder, non-binder or equivocal) following each run within a single laboratory are shown in Table 22. Classifications of test chemicals were based on only those runs where both positive controls (i.e., reference estrogen and weak binder) were judged to be acceptable. Each run for a given test chemical was designated as a “binder”, “equivocal”, or “non-binder”, according to the characteristics of the binding curve fits. The criteria for the designations are given in Table 22, and examples of competitive binding curves representing each classification are shown in Figure 6.

Table 21. Criteria for Assigning Classification Based Upon Test Chemical Binding Curve

Classification	Criteria
Binder ^a	A binding curve can be fit. • The lowest point on the response curve within the range of the data is less than 50%.
Non-binder ^b	If a binding curve can be fit, • the lowest point on the fitted response curve within the range of the data is above 75%. If a binding curve cannot be fit, • the lowest unsmoothed average percent binding among the concentration groups in the data is above 75%.
Equivocal ^c	Any testable run that is neither a binder nor a non-binder (e.b., The lowest point on the fitted response curve is between 76 – 51%).

^a A substance is classified as a “**binder**” for the hrER α if a log(IC₅₀) value can be obtained from a curve fitted to the Hill equation that has a slope of approximately -1.0. There must be at least one data point at which 50% or more of the radioligand has been displaced; the log(IC₅₀) may not be extrapolated from data which show less than 50% displacement, even if an appropriate Hill curve can be fitted.

^b Substances for which acceptable binding curves can be fit, and which do not displace more than 25% of the radioligand from the receptor, are classified as a “**non-binder**”. In addition, substances for which no binding curve can be fit and for which no data point at any concentration displaces more than 25% of the radioligand are also classified as a “**non-binder**”.

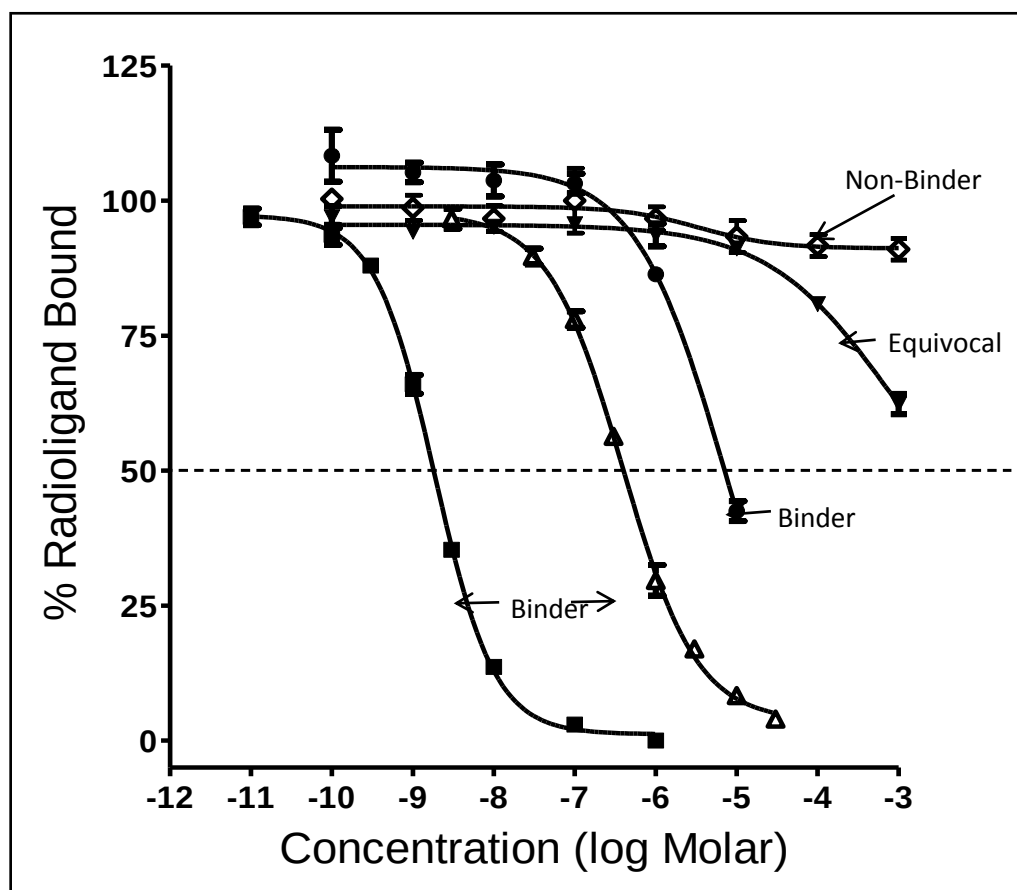
^c Due to solubility constraints (for example), some test compounds might induce a significant reduction in binding of the radioligand to the hrER α but without reducing it below 50%. Until additional information becomes available³

³ In these cases, an additional K_i experiment may be useful to determine if the test compound is truly a competitive inhibitor. An experimentally derived K_i requires adding increasing concentrations of radiolabeled ligand in the presence of fixed concentrations of test compound and then plotting the data on a double reciprocal plot (Laws et al., 1996; Kelce et al, 1995; Segel, 1993). A pattern of lines that intersects on the ordinate axis is characteristic of a chemical that exhibits competitive inhibition. Slopes obtained from each of the double reciprocal plots are then re-plotted as a function of the inhibitor concentration. The slope and intercept of the re-plot can be used to calculate a K_i value for the test compound (Segel, 1993).

about the significance of this category of dose response curves, substances with acceptable binding curves which reach 25% displacement but not 50% at the highest concentration with acceptable data should be classified as “**equivocal**”.

^dTest compounds whose fitted curves have slopes that are unusually steep or unusually shallow should also be classified as “**equivocal**”. Justification for classifying a chemical on this basis should cite the Hill slope obtained.

Figure 6. Examples of chemical classification using competitive binding curves.



Multiple runs conducted within a laboratory for a chemical are combined by assigning numeric values to each run and averaging across the runs as shown in Table 23. Results for the combined runs within each laboratory are compared with the expected classification for each test chemical.

Table 22. Method for classification of test chemical using multiple runs within a laboratory

To assign value to each run:	
Classification	Numeric Value
Binder	2
Equivocal	1
Non-binder	0
To classify average of numeric value across runs:	
Classification	Numeric Value
Binder	Average ≥ 1.5
Equivocal	$0.5 \leq \text{Average} < 1.5$
Non-binder	Average < 0.5

10.8 Test report

The test report must include, but is not limited to, the following information:

10.8.1 Test compound(s)

- Name, chemical structure, and CAS RN (Chemical Abstract Service Registry Number, CAS#), if known
- Physical nature (solid or liquid), and purity, if known
- Physicochemical properties relevant to the study (e.g., solubility, stability, volatility)

10.8.2 Solvent

- Justification for choice of solvent/vehicle if other than ethanol
- Maximum concentration of solvent in assay wells. (Show calculations.)
- Information to demonstrate that the solvent/vehicle, if other than an established solvent, does not bind to, or otherwise affect, the hrER α

10.7.3 [³H]-17 β -Estradiol

- Name, including number and position of tritium atom(s)
- Supplier, catalogue number, and batch number
- Specific Activity (SA) and date for which that SA was certified by supplier
- Concentration as received from supplier
- Concentrations tested (nM)
- Calculations made to obtain the appropriate concentrations

10.7.4 Unlabeled 17 β -Estradiol

- Supplier, batch, and catalog number
- CAS number
- Purity

10.7.5 hrER α

- Type and source of hrER α . If from a commercial source, the supplier must be identified.
- Method and conditions of transport and storage of hrER α .

10.7.6 Test Conditions

- K_d of the **unlabeled 17 β -estradiol**. Report the K_d obtained from the Saturation Binding Assay for each batch of hrER α **used**
- Concentration range and spacing of the **unlabeled 17 β -estradiol** tested.
- Composition of buffer(s) used.
- Concentration range and spacing of test compound, with justification if deviating from required range and spacing.
- Volume of vehicle used to dissolve test compound and volume of test compound added.
- Total volume per assay well.
- Incubation time and temperature.
- Concentration range and spacing of weak positive, negative, and solvent controls.

- Notes on any precipitation of test compound while making stock solutions or while adding test dilutions to the assay wells.
- Notes on any abnormalities during separation of free [^3H]-17 β -estradiol.
- Notes on any problems in analysis of bound [^3H]-17 β -estradiol.
- Notes on reasons for repeating a run, if a repeat was necessary.
- Methods used to determine IC_{50} values (software used, formulas, etc.).
- Statistical methods used, if any.

10.7.7 Results

Report the following for each run. Be sure to include the run number on each product.

- Date of run.
- Results (viz., the dpm counts for each well), inserted into the data worksheet provided in [Appendix D](#) (or similar), adjusted as necessary to accommodate the actual concentrations, volumes, etc. used in the assay. There should be one worksheet per run.
- Extent of precipitation of test compound (i.e., in stock solution, assay well, or not visible by eye).
- The solvent control response compared to the buffer control.
- % Binding data for each replicate at each dose level for all substances.
- Plot of each data point, along with the unconstrained curve fitted to the Hill equation, which demonstrates the performance of the test compound in repeat runs. The data points and curves for the reference chemical, weak positive control, and negative control from that test compound's run should also be plotted on the same graph as the test compound. Data and curves shall be differentiated by run (i.e., the reference chemical, positive control, negative control, and test compound data points and fitted curve from Run A should be differentiated from those of Run B and Run C, and Run B should be differentiated from Run C).
- K_i (calculated from the Cheng-Prusoff equation, Cheng et al., 1973) and $\log(\text{IC}_{50})$ values for 17 β -estradiol, the weak positive control, and the test compound.
- Calculated Relative Binding Affinity values for the positive control and the test compound determined from the same run, relative to RBA of 17 β -estradiol = 1. Report both the $\log(\text{RBA})$ and the RBA.
- A record of all protocol deviations or problems encountered shall be kept and included in the final report. This record should also be used to improve runs that follow.

10.7.8 Discussion

- K_d and $\log(\text{IC}_{50})$ values for reference ligand, including ranges, means, and standard deviations.
- Reproducibility of the K_d and $\log(\text{IC}_{50})$ values of the reference ligand.
- Positive control data with ranges, means, and standard deviations.
- Compare the estimated IC_{50} values for 17 β -estradiol to the value expected from the formula $\text{IC}_{50} = [\text{radioligand}] + K_d$.

10.7.9 Conclusion

- Classification of test compound with regard to *in vitro* hrER α -binding activity: positive, equivocal, or negative.
- If the test compound is positive, **report the range and average** RBAs obtained across the acceptable runs.

10.7.10 Replicate Studies

Generally, replicate studies are not mandated for screening assays. However, in situations where questionable data are obtained (i.e., the IC₅₀ value is not well defined), replicate tests to clarify the results of the primary test would be prudent.

11.0 References

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Appendix A:

Buffer Preparation Worksheet

Buffers to prepare prior to the day of the assay:

1) 100 mM Tris buffer pH 7.5 (10X stock buffer):

	Compound	Grams/mL	Comments	Added?
1	100 mM Tris base (10X stock)	12.11 g		
2	H ₂ O	Appr. 800 mL	Dissolve Tris, adjust pH to 7.5 with hydrochloric acid)	
3			Bring final volume to 1 L with water. Store at room temperature (may be stored up to 6 months, discard if buffer becomes cloudy).	

2) **Working Assay Buffer** Prepare on the day of assay and use to prepare the DCC suspension needed the following day. Note: after using the buffer to set up the assay on Day 1, remember to store remaining buffer overnight at 2° to 8°C so it can be used on Day 2 to make the DCC suspension.

For 200 mL of the Working Assay Buffer add the following components to 150 mL of water, once all components are dissolved, bring final volume to 200 mL and stir gently.

	Compound	Grams/ mL	Comments	Added?
1	100 mM Tris buffer (10X Stock)	20 mL	Made previously and stored at RT	
2	BSA	2000 mg	Add immediately before use – let buffer sit until BSA is dissolved, then stir to mix gently	
3	Glycerol	20 mL	Add immediately before use	
4	Leupeptin	19 mg	Add immediately before use	
5	DTT	61.7 mg	Add immediately before use	

Appendix B:
Typical [³H]-17β-Estradiol Saturation Assay with Three Replicate Wells

Typical [³ H]-17β-Estradiol Saturation Assay with Three Replicate Wells											
Position	Replicate	Well Type Code	Hot E2 Initial Concentration (nM)	Hot E2 Volume (uL)	Hot E2 Final Concentration (nM)	Cold E2 Initial Concentration (uM)	Cold E2 Volume (uL)	Cold E2 Final Concentration (uM)	Buffer Volume (uL)	Receptor Volume (uL)	Total volume in wells
A1	1	H	0.12	40	0.03	—	—	—	80	40	160
A2	2	H	0.12	40	0.03	—	—	—	80	40	160
A3	3	H	0.12	40	0.03	—	—	—	80	40	160
A4	1	H	0.24	40	0.06	—	—	—	80	40	160
A5	2	H	0.24	40	0.06	—	—	—	80	40	160
A6	3	H	0.24	40	0.06	—	—	—	80	40	160
A7	1	H	0.32	40	0.08	—	—	—	80	40	160
A8	2	H	0.32	40	0.08	—	—	—	80	40	160
A9	3	H	0.32	40	0.08	—	—	—	80	40	160
A10	1	H	0.40	40	0.10	—	—	—	80	40	160
A11	2	H	0.40	40	0.10	—	—	—	80	40	160
A12	3	H	0.40	40	0.10	—	—	—	80	40	160
B1	1	H	1.20	40	0.30	—	—	—	80	40	160
B2	2	H	1.20	40	0.30	—	—	—	80	40	160
B3	3	H	1.20	40	0.30	—	—	—	80	40	160
B4	1	H	2.40	40	0.60	—	—	—	80	40	160
B5	2	H	2.40	40	0.60	—	—	—	80	40	160
B6	3	H	2.40	40	0.60	—	—	—	80	40	160
B7	1	H	4.00	40	1.00	—	—	—	80	40	160
B8	2	H	4.00	40	1.00	—	—	—	80	40	160
B9	3	H	4.00	40	1.00	—	—	—	80	40	160
B10	1	H	12.00	40	3.00	—	—	—	80	40	160
B11	2	H	12.00	40	3.00	—	—	—	80	40	160
B12	3	H	12.00	40	3.00	—	—	—	80	40	160
D1	1	HC	0.12	40	0.03	0.06	80	0.03	—	40	160
D2	2	HC	0.12	40	0.03	0.06	80	0.03	—	40	160
D3	3	HC	0.12	40	0.03	0.06	80	0.03	—	40	160
D4	1	HC	0.24	40	0.06	0.12	80	0.06	—	40	160
D5	2	HC	0.24	40	0.06	0.12	80	0.06	—	40	160
D6	3	HC	0.24	40	0.06	0.12	80	0.06	—	40	160
D7	1	HC	0.32	40	0.08	0.16	80	0.08	—	40	160
D8	2	HC	0.32	40	0.08	0.16	80	0.08	—	40	160
D9	3	HC	0.32	40	0.08	0.16	80	0.08	—	40	160
D10	1	HC	0.40	40	0.10	0.2	80	0.1	—	40	160
D11	2	HC	0.40	40	0.10	0.2	80	0.1	—	40	160
D12	3	HC	0.40	40	0.10	0.2	80	0.1	—	40	160

Typical [³ H]-17β-Estradiol Saturation Assay with Three Replicate Wells											
Position	Replicate	Well Type Code	Hot E2 Initial Concentration (nM)	Hot E2 Volume (uL)	Hot E2 Final Concentration (nM)	Cold E2 Initial Concentration (uM)	Cold E2 Volume (uL)	Cold E2 Final Concentration (uM)	Buffer Volume (uL)	Receptor Volume (uL)	Total volume in wells
E1	1	HC	1.20	40	0.30	0.6	80	0.3	—	40	160
E2	2	HC	1.20	40	0.30	0.6	80	0.3	—	40	160
E3	3	HC	1.20	40	0.30	0.6	80	0.3	—	40	160
E4	1	HC	2.40	40	0.60	1.2	80	0.6	—	40	160
E5	2	HC	2.40	40	0.60	1.2	80	0.6	—	40	160
E6	3	HC	2.40	40	0.60	1.2	80	0.6	—	40	160
E7	1	HC	4.00	40	1.00	2	80	1	—	40	160
E8	2	HC	4.00	40	1.00	2	80	1	—	40	160
E9	3	HC	4.00	40	1.00	2	80	1	—	40	160
E10	1	HC	12.00	40	3.00	6	80	3	—	40	160
E11	2	HC	12.00	40	3.00	6	80	3	—	40	160
E12	3	HC	12.00	40	3.00	6	80	3	—	40	160
G1	1	Hot	0.12	40	0.03	—	—	—	—	—	40
G2	2	Hot	0.12	40	0.03	—	—	—	—	—	40
G3	3	Hot	0.12	40	0.03	—	—	—	—	—	40
G4	1	Hot	0.24	40	0.06	—	—	—	—	—	40
G5	2	Hot	0.24	40	0.06	—	—	—	—	—	40
G6	3	Hot	0.24	40	0.06	—	—	—	—	—	40
G7	1	Hot	0.32	40	0.08	—	—	—	—	—	40
G8	2	Hot	0.32	40	0.08	—	—	—	—	—	40
G9	3	Hot	0.32	40	0.08	—	—	—	—	—	40
G10	1	Hot	0.40	40	0.10	—	—	—	—	—	40
G11	2	Hot	0.40	40	0.10	—	—	—	—	—	40
G12	3	Hot	0.40	40	0.10	—	—	—	—	—	40
H1	1	Hot	1.20	40	0.30	—	—	—	—	—	40
H2	2	Hot	1.20	40	0.30	—	—	—	—	—	40
H3	3	Hot	1.20	40	0.30	—	—	—	—	—	40
H4	1	Hot	2.40	40	0.60	—	—	—	—	—	40
H5	2	Hot	2.40	40	0.60	—	—	—	—	—	40
H6	3	Hot	2.40	40	0.60	—	—	—	—	—	40
H7	1	Hot	4.00	40	1.00	—	—	—	—	—	40
H8	2	Hot	4.00	40	1.00	—	—	—	—	—	40
H9	3	Hot	4.00	40	1.00	—	—	—	—	—	40
H10	1	Hot	12.00	40	3.00	—	—	—	—	—	40
H11	2	Hot	12.00	40	3.00	—	—	—	—	—	40
H12	3	Hot	12.00	40	3.00	—	—	—	—	—	40

Appendix C: Competitive Binding Assay Well Layout

Competitive Binding Assay Well Layout												
Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (uL)	Competitor Final Concentration (M)
S	A1	1	total binding	TB	TB1	-	40	-	40	80	160	-
S	A2	2	total binding	TB	TB2	-	40	-	40	80	160	-
S	A3	3	total binding	TB	TB3	-	40	-	40	80	160	-
S	A4	1	total binding	TB	TB4	-	40	-	40	80	160	-
S	A5	2	total binding	TB	TB5	-	40	-	40	80	160	-
S	A6	3	total binding	TB	TB6	-	40	-	40	80	160	-
S	A7	1	cold E2 (high)	NSB	S0	2.00E-06	40	-	40	80	160	1.0E-06
S	A8	2	cold E2 (high)	NSB	S0	2.00E-06	40	-	40	80	160	1.0E-06
S	A9	3	cold E2 (high)	NSB	S0	2.00E-06	40	-	40	80	160	1.0E-06
S	A10	1	cold E2 (high)	NSB	S0	2.00E-06	40	-	40	80	160	1.0E-06
S	A11	2	cold E2 (high)	NSB	S0	2.00E-06	40	-	40	80	160	1.0E-06
S	A12	3	cold E2 (high)	NSB	S0	2.00E-06	40	-	40	80	160	1.0E-06
S	B1	1	cold E2	S	S1	2.00E-07	40	-	40	80	160	1.0E-07
S	B2	2	cold E2	S	S1	2.00E-07	40	-	40	80	160	1.0E-07
S	B3	3	cold E2	S	S1	2.00E-07	40	-	40	80	160	1.0E-07
S	B4	1	cold E2	S	S2	2.00E-08	40	-	40	80	160	1.0E-08
S	B5	2	cold E2	S	S2	2.00E-08	40	-	40	80	160	1.0E-08
S	B6	3	cold E2	S	S2	2.00E-08	40	-	40	80	160	1.0E-08
S	B7	1	cold E2	S	S3	6.00E-09	40	-	40	80	160	3.0E-09
S	B8	2	cold E2	S	S3	6.00E-09	40	-	40	80	160	3.0E-09
S	B9	3	cold E2	S	S3	6.00E-09	40	-	40	80	160	3.0E-09
S	B10	1	cold E2	S	S4	2.00E-09	40	-	40	80	160	1.0E-09
S	B11	2	cold E2	S	S4	2.00E-09	40	-	40	80	160	1.0E-09
S	B12	3	cold E2	S	S4	2.00E-09	40	-	40	80	160	1.0E-09
S	C1	1	cold E2	S	S5	6.00E-10	40	-	40	80	160	3.0E-10
S	C2	2	cold E2	S	S5	6.00E-10	40	-	40	80	160	3.0E-10
S	C3	3	cold E2	S	S5	6.00E-10	40	-	40	80	160	3.0E-10
S	C4	1	cold E2	S	S6	2.00E-10	40	-	40	80	160	1.0E-10
S	C5	2	cold E2	S	S6	2.00E-10	40	-	40	80	160	1.0E-10
S	C6	3	cold E2	S	S6	2.00E-10	40	-	40	80	160	1.0E-10
S	C7	1	cold E2	S	S7	2.00E-11	40	-	40	80	160	1.0E-11
S	C8	2	cold E2	S	S7	2.00E-11	40	-	40	80	160	1.0E-11
S	C9	3	cold E2	S	S7	2.00E-11	40	-	40	80	160	1.0E-11
S	C10	1	blank	blank	B1	-	-	160	-	-	160	-
S	C11	2	blank	blank	B2	-	-	160	-	-	160	-
S	C12	3	blank	blank	B3	-	-	160	-	-	160	-
S	D1	1	norethynodrel	NE	WP1	6.00E-05	40	-	40	80	160	3.0E-05
S	D2	1	norethynodrel	NE	WP1	6.00E-05	40	-	40	80	160	3.0E-05
S	D3	1	norethynodrel	NE	WP1	6.00E-05	40	-	40	80	160	3.0E-05
S	D4	1	norethynodrel	NE	WP2	2.00E-05	40	-	40	80	160	1.0E-05
S	D5	1	norethynodrel	NE	WP2	2.00E-05	40	-	40	80	160	1.0E-05
S	D6	1	norethynodrel	NE	WP2	2.00E-05	40	-	40	80	160	1.0E-05
S	D7	1	norethynodrel	NE	WP3	6.00E-06	40	-	40	80	160	3.0E-06
S	D8	1	norethynodrel	NE	WP3	6.00E-06	40	-	40	80	160	3.0E-06
S	D9	1	norethynodrel	NE	WP3	6.00E-06	40	-	40	80	160	3.0E-06
S	D10	1	norethynodrel	NE	WP4	2.00E-06	40	-	40	80	160	1.0E-06
S	D11	1	norethynodrel	NE	WP4	2.00E-06	40	-	40	80	160	1.0E-06
S	D12	1	norethynodrel	NE	WP4	2.00E-06	40	-	40	80	160	1.0E-06

Competitive Binding Assay Well Layout

Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (uL)	Competitor Final Concentration (M)
S	E1	1	norethynodrel	NE	WP5	6.00E-07	40	-	40	80	160	3.0E-07
S	E2	2	norethynodrel	NE	WP5	6.00E-07	40	-	40	80	160	3.0E-07
S	E3	3	norethynodrel	NE	WP5	6.00E-07	40	-	40	80	160	3.0E-07
S	E4	1	norethynodrel	NE	WP6	2.00E-07	40	-	40	80	160	1.0E-07
S	E5	2	norethynodrel	NE	WP6	2.00E-07	40	-	40	80	160	1.0E-07
S	E6	3	norethynodrel	NE	WP6	2.00E-07	40	-	40	80	160	1.0E-07
S	D7	1	norethynodrel	NE	WP7	6.00E-08	40	-	40	80	160	3.0E-08
S	E8	2	norethynodrel	NE	WP7	6.00E-08	40	-	40	80	160	3.0E-08
S	E9	3	norethynodrel	NE	WP7	6.00E-08	40	-	40	80	160	3.0E-08
S	E10	1	norethynodrel	NE	WP8	6.00E-09	40	-	40	80	160	3.0E-09
S	E11	2	norethynodrel	NE	WP8	6.00E-09	40	-	40	80	160	3.0E-09
S	E12	3	norethynodrel	NE	WP8	6.00E-09	40	-	40	80	160	3.0E-09
S	F1	1	blank	blank	B4	-	-	160	-	-	160	-
S	F2	2	blank	blank	B5	-	-	160	-	-	160	-
S	F3	3	blank	blank	B6	-	-	160	-	-	160	-
S	F4	1	DBP	N	DBP2	2.00E-04	40	-	40	80	160	1.0E-04
S	F5	2	DBP	N	DBP2	2.00E-04	40	-	40	80	160	1.0E-04
S	F6	3	DBP	N	DBP2	2.00E-04	40	-	40	80	160	1.0E-04
S	F7	1	DBP	N	DBP3	2.00E-05	40	-	40	80	160	1.0E-05
S	F8	2	DBP	N	DBP3	2.00E-05	40	-	40	80	160	1.0E-05
S	F9	3	DBP	N	DBP3	2.00E-05	40	-	40	80	160	1.0E-05
S	F10	1	DBP	N	DBP4	2.00E-06	40	-	40	80	160	1.0E-06
S	F11	2	DBP	N	DBP4	2.00E-06	40	-	40	80	160	1.0E-06
S	F12	3	DBP	N	DBP4	2.00E-06	40	-	40	80	160	1.0E-06
S	G1	1	DBP	N	DBP5	2.00E-07	40	-	40	80	160	1.0E-07
S	G2	2	DBP	N	DBP5	2.00E-07	40	-	40	80	160	1.0E-07
S	G3	3	DBP	N	DBP5	2.00E-07	40	-	40	80	160	1.0E-07
S	G4	1	DBP	N	DBP6	2.00E-08	40	-	40	80	160	1.0E-08
S	G5	2	DBP	N	DBP6	2.00E-08	40	-	40	80	160	1.0E-08
S	G6	3	DBP	N	DBP6	2.00E-08	40	-	40	80	160	1.0E-08
S	G7	1	DBP	N	DBP7	2.00E-09	40	-	40	80	160	1.0E-09
S	G8	2	DBP	N	DBP7	2.00E-09	40	-	40	80	160	1.0E-09
S	G9	3	DBP	N	DBP7	2.00E-09	40	-	40	80	160	1.0E-09
S	G10	1	DBP	N	DBP8	2.00E-10	40	-	40	80	160	1.0E-10
S	G11	2	DBP	N	DBP8	2.00E-10	40	-	40	80	160	1.0E-10
S	G12	3	DBP	N	DBP8	2.00E-10	40	-	40	80	160	1.0E-10
S	H1	1	hot	H	H1	-	-	-	40	-	40	-
S	H2	2	hot	H	H2	-	-	-	40	-	40	-
S	H3	3	hot	H	H3	-	-	-	40	-	40	-
S	H4	1	hot	H	H4	-	-	-	40	-	40	-
S	H5	2	hot	H	H5	-	-	-	40	-	40	-
S	H6	3	hot	H	H6	-	-	-	40	-	40	-
S	H7	1	buffer control	BC	BC1	-	40	80	40	-	160	-
S	H8	2	buffer control	BC	BC2	-	40	80	40	-	160	-
S	H9	3	buffer control	BC	BC3	-	40	80	40	-	160	-
S	H10	1	buffer control	BC	BC4	-	40	80	40	-	160	-
S	H11	2	buffer control	BC	BC5	-	40	80	40	-	160	-
S	H12	3	buffer control	BC	BC6	-	40	80	40	-	160	-

Note that the "hot" wells are empty during incubation. The 40 uL are added only for scintillation counting.

Competitive Binding Assay Well Layout

Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (uL)	Competitor Final Concentration (M)
P1	A1	1	Test Chemical 1	TC1	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	A2	2	Test Chemical 1	TC1	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	A3	3	Test Chemical 1	TC1	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	A4	1	Test Chemical 1	TC1	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	A5	2	Test Chemical 1	TC1	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	A6	3	Test Chemical 1	TC1	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	A7	1	Test Chemical 1	TC1	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	A8	2	Test Chemical 1	TC1	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	A9	3	Test Chemical 1	TC1	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	A10	1	Test Chemical 1	TC1	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	A11	2	Test Chemical 1	TC1	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	A12	3	Test Chemical 1	TC1	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	B1	1	Test Chemical 1	TC1	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	B2	2	Test Chemical 1	TC1	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	B3	3	Test Chemical 1	TC1	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	B4	1	Test Chemical 1	TC1	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	B5	2	Test Chemical 1	TC1	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	B6	3	Test Chemical 1	TC1	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	B7	1	Test Chemical 1	TC1	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	B8	2	Test Chemical 1	TC1	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	B9	3	Test Chemical 1	TC1	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	B10	1	Test Chemical 1	TC1	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	B11	2	Test Chemical 1	TC1	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	B12	3	Test Chemical 1	TC1	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	C1	1	Test Chemical 2	TC2	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	C2	2	Test Chemical 2	TC2	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	C3	3	Test Chemical 2	TC2	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	C4	1	Test Chemical 2	TC2	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	C5	2	Test Chemical 2	TC2	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	C6	3	Test Chemical 2	TC2	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	C7	1	Test Chemical 2	TC2	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	C8	2	Test Chemical 2	TC2	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	C9	3	Test Chemical 2	TC2	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	C10	1	Test Chemical 2	TC2	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	C11	2	Test Chemical 2	TC2	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	C12	3	Test Chemical 2	TC2	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	D1	1	Test Chemical 2	TC2	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	D2	2	Test Chemical 2	TC2	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	D3	3	Test Chemical 2	TC2	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	D4	1	Test Chemical 2	TC2	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	D5	2	Test Chemical 2	TC2	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	D6	3	Test Chemical 2	TC2	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	D7	1	Test Chemical 2	TC2	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	D8	2	Test Chemical 2	TC2	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	D9	3	Test Chemical 2	TC2	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	D10	1	Test Chemical 2	TC2	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	D11	2	Test Chemical 2	TC2	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	D12	3	Test Chemical 2	TC2	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	E1	1	Test Chemical 3	TC3	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	E2	2	Test Chemical 3	TC3	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	E3	3	Test Chemical 3	TC3	1	2.00E-03	40	0	40	80	160	1.0E-03

Competitive Binding Assay Well Layout												
Plate	Position	Replicate	Well type	Well Code	Concentration Code	Competitor Initial Concentration (M)	hrER stock (uL)	Buffer Volume (uL)	Tracer (Hot E2) Volume (uL)	Volume from dilution plate (uL)	Final Volume (ul)	Competitor Final Concentration (M)
P1	E4	1	Test Chemical 3	TC3	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	E5	2	Test Chemical 3	TC3	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	E6	3	Test Chemical 3	TC3	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	E7	1	Test Chemical 3	TC3	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	E8	2	Test Chemical 3	TC3	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	E9	3	Test Chemical 3	TC3	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	E10	1	Test Chemical 3	TC3	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	E11	2	Test Chemical 3	TC3	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	E12	3	Test Chemical 3	TC3	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	F1	1	Test Chemical 3	TC3	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	F2	2	Test Chemical 3	TC3	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	F3	3	Test Chemical 3	TC3	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	F4	1	Test Chemical 3	TC3	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	F5	2	Test Chemical 3	TC3	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	F6	3	Test Chemical 3	TC3	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	F7	1	Test Chemical 3	TC3	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	F8	2	Test Chemical 3	TC3	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	F9	3	Test Chemical 3	TC3	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	F10	1	Test Chemical 3	TC3	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	F11	2	Test Chemical 3	TC3	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	F12	3	Test Chemical 3	TC3	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	G1	1	Test Chemical 4	TC4	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	G2	2	Test Chemical 4	TC4	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	G3	3	Test Chemical 4	TC4	1	2.00E-03	40	0	40	80	160	1.0E-03
P1	G4	1	Test Chemical 4	TC4	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	G5	2	Test Chemical 4	TC4	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	G6	3	Test Chemical 4	TC4	2	2.00E-04	40	0	40	80	160	1.0E-04
P1	G7	1	Test Chemical 4	TC4	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	G8	2	Test Chemical 4	TC4	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	G9	3	Test Chemical 4	TC4	3	2.00E-05	40	0	40	80	160	1.0E-05
P1	G10	1	Test Chemical 4	TC4	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	G11	2	Test Chemical 4	TC4	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	G12	3	Test Chemical 4	TC4	4	2.00E-06	40	0	40	80	160	1.0E-06
P1	H1	1	Test Chemical 4	TC4	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	H2	2	Test Chemical 4	TC4	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	H3	3	Test Chemical 4	TC4	5	2.00E-07	40	0	40	80	160	1.0E-07
P1	H4	1	Test Chemical 4	TC4	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	H5	2	Test Chemical 4	TC4	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	H6	3	Test Chemical 4	TC4	6	2.00E-08	40	0	40	80	160	1.0E-08
P1	H7	1	Test Chemical 4	TC4	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	H8	2	Test Chemical 4	TC4	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	H9	3	Test Chemical 4	TC4	7	2.00E-09	40	0	40	80	160	1.0E-09
P1	H10	1	Test Chemical 4	TC4	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	H11	2	Test Chemical 4	TC4	8	2.00E-10	40	0	40	80	160	1.0E-10
P1	H12	3	Test Chemical 4	TC4	8	2.00E-10	40	0	40	80	160	1.0E-10

Appendix L: Data Analysis Reported in Tables

FW Assay. Subtask 1. PRISM fit parameters for reference estrogens

FW Assay. Subtask 1. PRISM fit parameters for the reference estrogen, 17 β -estradiol														
Laboratory	Run ID	Acceptable (E2/NE)	PRISM Fit Parameters											
			Bottom	Top	LogIC ₅₀	HillSlope	Bottom SEM	Top SEM	LogIC ₅₀ SEM	HillSlope SEM	DF	R2	Syx	N
Ceetox	20081123	A	2.03	93.84	-8.74	-1.55	2.34	2.89	0.04	0.25	23	0.973	7.218	27
Ceetox	20081218	A	0.29	103.8	-8.78	-0.96	2.79	4.95	0.05	0.15	22	0.969	7.773	26
Dietrich	Assay03	A	1.47	92.85	-8.85	-1.28	3.32	4.6	0.07	0.28	23	0.944	10.03	27
Dietrich	Assay02	U	-0.19	130.5	-8.72	-0.7	2.48	4.94	0.04	0.07	23	0.985	6.07	27
Freyberger	A	A	0.3	97.65	-8.89	-1.14	0.74	1.13	0.01	0.05	23	0.997	2.212	27
Freyberger	B	A	0.56	96.22	-8.89	-1.13	0.66	0.99	0.01	0.05	23	0.998	1.943	27
Freyberger	D	A	0.14	106.4	-9.01	-0.93	0.66	1.23	0.01	0.03	23	0.998	1.917	27
Freyberger	E	DMSO(A)	-0.51	114.4	-8.99	-0.86	0.72	1.42	0.01	0.03	23	0.998	2.038	27
Freyberger	F	DMSO(A)	0.2	106.5	-9.08	-0.91	0.73	1.43	0.01	0.04	23	0.998	2.125	27
Freyberger	G	DMSO(A)	-0.2	93.13	-9.11	-0.95	1	1.8	0.02	0.06	23	0.994	2.898	27
JapanCERI	20090113_01	A	0.75	94.01	-8.83	-1.15	0.8	1.14	0.02	0.06	23	0.997	2.34	27
JapanCERI	20090121_02	A	0.01	100.8	-8.76	-1.11	0.95	1.36	0.02	0.06	23	0.996	2.769	27
JapanCERI	20090128_03	A	0.76	97.34	-8.74	-1.16	0.7	0.95	0.01	0.05	23	0.998	2.032	27
Lovelace	13-Dec-08	A	5.68	111.6	-8.86	-1.04	3.2	5.41	0.06	0.19	23	0.957	9.489	27
Lovelace	3-Dec-08	U	4.67	169.6	-8.58	-0.78	5.97	11.55	0.1	0.16	22	0.947	15.11	26
Lovelace	9-Dec-08	U	0.74	178.3	-8.75	-0.94	8.68	17.37	0.14	0.27	23	0.883	25.69	27
Lovelace	27-Jan-09	U	2.33	132.6	-8.84	-0.83	5.71	11.59	0.1	0.21	23	0.911	15.87	27
Missouri	7003	A	0.56	111.3	-8.92	-1.09	1.03	1.03	0.02	0.08	23	0.997	3.053	27
Missouri	7004	A	-0.09	112.9	-8.87	-0.92	1.84	1.8	0.05	0.1	23	0.991	5.144	27
Missouri	7005	A	-0.39	105.7	-8.92	-0.88	2.3	2.23	0.06	0.12	23	0.985	6.29	27
Missouri	7006	A	-0.57	107.4	-8.86	-0.99	1.83	2.98	0.03	0.1	23	0.987	5.277	27
Missouri	7007	A	0.12	109.2	-8.92	-0.96	1.16	2.03	0.02	0.06	23	0.995	3.368	27
Missouri	3006	U	-5.69	155.3	-9.52	-0.36	5.09	47.38	0.07	0.1	23	0.968	6.312	27

Mean	-8.88826
SD	0.183021
n	23

Mean	0.976783
SD	0.030558
n	23

FW Assay. Subtask 1. PRISM fit parameters for the weak binder, norethynodrel														
Laboratory	Run ID	Acceptable (E2/NE)	PRISM Fit Parameters											
			Bottom	Top	LogIC ₅₀	HillSlope	Bottom SEM	Top SEM	LogIC ₅₀ SEM	HillSlope SEM	DF	R2	Syx	N
Ceetox	20081123	A	9.56	87.25	-6.18	-1.59	2.76	2.52	0.05	0.28	20	0.97	6.408	24
Ceetox	20081124	A	0.52	87.7	-6.34	-0.93	4.85	4	0.06	0.18	20	0.96	7.255	24
Ceetox	20081218	A	4.3	93.44	-6.21	-1.18	3.17	2.8	0.04	0.18	20	0.976	6.063	24
Dietrich	Assay03	A	3.19	100.3	-5.57	-1.13	8.18	3.14	0.06	0.26	20	0.956	8.268	24
Dietrich	Assay02	U	-9.91	133.2 ^u	-5.52	-0.66	11	3.96	0.05	0.1	20	0.985	5.954	24
Freyberger	A	A	2.75	101.1	-6.35	-0.95	1.29	1.32	0.02	0.05	20	0.997	2.249	24
Freyberger	B	A	3.57	97.67	-6.4	-0.95	1.39	1.46	0.02	0.06	20	0.996	2.464	24
Freyberger	D	A	1.54	108.2	-6.15	-0.89	1.47	1.24	0.02	0.04	20	0.998	2.14	24
Freyberger	E	DMSO(A)	1.36	99.88	-6.37	-0.89	1.18	1.18	0.01	0.04	20	0.998	1.93	24
Freyberger	F	DMSO(A)	3.15	100.4	-6.46	-1	1.7	1.96	0.02	0.08	20	0.993	3.341	24
Freyberger	G	DMSO(A)	4.95	86.43	-6.45	-1.16	1.21	1.27	0.02	0.08	20	0.995	2.534	24
JapanCERI	20090113_01	A	1.17	90.23	-6.59	-0.93	1.48	1.69	0.02	0.07	20	0.994	2.717	24
JapanCERI	20090121_02	A	2.28	99.31	-6.58	-0.92	0.86	1.09	0.01	0.04	20	0.998	1.648	24
JapanCERI	20090128_03	A	0.94	99.9	-6.51	-0.85	1.27	1.44	0.02	0.04	20	0.997	2.121	24
Lovelace	3-Dec-08	U	8.1	131.7 ^u	-5.54	-0.7	14.25	7.33	0.1	0.2	20	0.939	11.17	24
Lovelace	9-Dec-08	U	-8.33	137.5 ^u	-5.7	-0.7	17.03	8.68	0.09	0.2	20	0.939	13.14	24
Lovelace	13-Dec-08	U	17.29	106.7 ^u	-5.88	-1.29	4.03	3.19	0.06	0.25	20	0.964	7.639	24
Lovelace	27-Jan-09	U	-4.77	114.6 ^u	-6.46	-0.65	8.13	9.21	0.07	0.16	20	0.952	9.345	24
Missouri	3006	A	3.66	90.53	-6.64	-1.08	1.62	2.08	0.03	0.1	20	0.99	3.595	24
Missouri	7003	A	0.82	102.2	-6.36	-0.95	1.54	1.57	0.02	0.06	20	0.996	2.705	24
Missouri	7004	A	0.74	109.3	-6.4	-0.94	2.14	2.41	0.03	0.08	20	0.992	3.954	24
Missouri	7005	A	0.1	101.2	-6.47	-0.89	1.4	1.55	0.02	0.05	20	0.996	2.421	24
Missouri	7006	A	1.23	110.6	-6.47	-0.79	3.36	4.08	0.04	0.1	20	0.984	5.359	24
Missouri	7007	A	0.92	107.8	-6.4	-0.84	1.45	1.58	0.02	0.04	20	0.997	2.342	24

Mean	-6.25
SD	0.344939
n	24

Mean	0.98175
SD	0.019674
n	24

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	CeeTox	20080724-1	0.03	1136	696	662.33	86	44.67	617.67	54.372	6.744
FW	CeeTox	20080724-1	0.03	1136	734		29				
FW	CeeTox	20080724-1	0.03	1136	557		19				
FW	CeeTox	20080724-1	0.06	1592	1080	1024.00	29	35.33	988.67	62.102	3.451
FW	CeeTox	20080724-1	0.06	1592	1037		34				
FW	CeeTox	20080724-1	0.06	1592	955		43				
FW	CeeTox	20080724-1	0.08	2861	1397	1412.67	34	37.00	1375.67	48.083	2.619
FW	CeeTox	20080724-1	0.08	2861	1507		29				
FW	CeeTox	20080724-1	0.08	2861	1334		48				
FW	CeeTox	20080724-1	0.1	3422.667	1690	1667.33	67	67.00	1600.33	46.757	4.018
FW	CeeTox	20080724-1	0.1	3422.667	1632		72				
FW	CeeTox	20080724-1	0.1	3422.667	1680		62				
FW	CeeTox	20080724-1	0.3	11268.33	5851	5252.67	317	251.33	5001.33	44.384	4.785
FW	CeeTox	20080724-1	0.3	11268.33	5501		293				
FW	CeeTox	20080724-1	0.3	11268.33	4406		144				
FW	CeeTox	20080724-1	0.6	21279.67	7430	7006.33	379	347.00	6659.33	31.294	4.953
FW	CeeTox	20080724-1	0.6	21279.67	6979		336				
FW	CeeTox	20080724-1	0.6	21279.67	6610		326				
FW	CeeTox	20080724-1	1	36211.67	11011	10473.67	614	580.67	9893.00	27.320	5.544
FW	CeeTox	20080724-1	1	36211.67	11002		523				
FW	CeeTox	20080724-1	1	36211.67	9408		605				
FW	CeeTox	20080724-1	3	113265	12955	12824.00	1541	1518.33	11305.67	9.982	11.840
FW	CeeTox	20080724-1	3	113265	12624		1488				
FW	CeeTox	20080724-1	3	113265	12893		1526				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	CeeTox	20080807-3	0.03	1309.333	768	654.67	202	121.67	533.00	40.708	18.585
FW	CeeTox	20080807-3	0.03	1309.333	610		134				
FW	CeeTox	20080807-3	0.03	1309.333	586		29				
FW	CeeTox	20080807-3	0.06	2337.667	1128	1072.00	53	88.00	984.00	42.093	8.209
FW	CeeTox	20080807-3	0.06	2337.667	1085		96				
FW	CeeTox	20080807-3	0.06	2337.667	1003		115				
FW	CeeTox	20080807-3	0.08	3131.667	1378	1414.33	43	68.67	1345.67	42.970	4.855
FW	CeeTox	20080807-3	0.08	3131.667	1430		67				
FW	CeeTox	20080807-3	0.08	3131.667	1435		96				
FW	CeeTox	20080807-3	0.1	3765.667	1709	1689.67	53	78.67	1611.00	42.781	4.656
FW	CeeTox	20080807-3	0.1	3765.667	1718		53				
FW	CeeTox	20080807-3	0.1	3765.667	1642		130				
FW	CeeTox	20080807-3	0.3	12184	4987	4707.00	293	260.67	4446.33	36.493	5.538
FW	CeeTox	20080807-3	0.3	12184	4968		302				
FW	CeeTox	20080807-3	0.3	12184	4166		187				
FW	CeeTox	20080807-3	0.6	22117.33	6696	6310.33	365	395.33	5915.00	26.744	6.265
FW	CeeTox	20080807-3	0.6	22117.33	6235		451				
FW	CeeTox	20080807-3	0.6	22117.33	6000		370				
FW	CeeTox	20080807-3	1	37238.33	8405	8262.33	557	589.00	7673.33	20.606	7.129
FW	CeeTox	20080807-3	1	37238.33	8587		605				
FW	CeeTox	20080807-3	1	37238.33	7795		605				
FW	CeeTox	20080807-3	3	114102	11602	11603.33	1392	1406.67	10196.67	8.936	12.123
FW	CeeTox	20080807-3	3	114102	11923		1426				
FW	CeeTox	20080807-3	3	114102	11285		1402				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	CeeTox	20080917-4	0.03	1187	787	604.67	158	86.33	518.33	43.668	14.278
FW	CeeTox	20080917-4	0.03	1187	600		53				
FW	CeeTox	20080917-4	0.03	1187	427		48				
FW	CeeTox	20080917-4	0.06	2120	984	913.67	38	71.67	842.00	39.717	7.844
FW	CeeTox	20080917-4	0.06	2120	888		115				
FW	CeeTox	20080917-4	0.06	2120	869		62				
FW	CeeTox	20080917-4	0.08	2981	1392	1193.67	96	107.00	1086.67	36.453	8.964
FW	CeeTox	20080917-4	0.08	2981	1440		91				
FW	CeeTox	20080917-4	0.08	2981	749		134				
FW	CeeTox	20080917-4	0.1	3521	1776	1811.33	110	84.67	1726.67	49.039	4.674
FW	CeeTox	20080917-4	0.1	3521	1733		43				
FW	CeeTox	20080917-4	0.1	3521	1925		101				
FW	CeeTox	20080917-4	0.3	11938	6422	4867.00	346	323.33	4543.67	38.061	6.643
FW	CeeTox	20080917-4	0.3	11938	4651		346				
FW	CeeTox	20080917-4	0.3	11938	3528		278				
FW	CeeTox	20080917-4	0.6	22428	6442	6200.33	389	427.33	5773.00	25.740	6.892
FW	CeeTox	20080917-4	0.6	22428	6149		480				
FW	CeeTox	20080917-4	0.6	22428	6010		413				
FW	CeeTox	20080917-4	1	36272	10238	9185.67	730	670.33	8515.33	23.476	7.298
FW	CeeTox	20080917-4	1	36272	9226		590				
FW	CeeTox	20080917-4	1	36272	8093		691				
FW	CeeTox	20080917-4	3	106562	12110	11910.33	1910	1723.00	10187.33	9.560	14.466
FW	CeeTox	20080917-4	3	106562	11563		1637				
FW	CeeTox	20080917-4	3	106562	12058		1622				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Lovelace	sat3	0.03	1258	682	659.33	115	38.33	621.00	49.364	5.814
FW	Lovelace	sat3	0.03	1258	691		0				
FW	Lovelace	sat3	0.03	1258	605		0				
FW	Lovelace	sat3	0.06	2496.333	998	1059.00	34	34.00	1025.00	41.060	3.211
FW	Lovelace	sat3	0.06	2496.333	1104						
FW	Lovelace	sat3	0.06	2496.333	1075						
FW	Lovelace	sat3	0.08	3282.667	1670	1760.00	67	59.33	1700.67	51.807	3.371
FW	Lovelace	sat3	0.08	3282.667	1757		29				
FW	Lovelace	sat3	0.08	3282.667	1853		82				
FW	Lovelace	sat3	0.1	4077.333	1939	1865.67	48	54.33	1811.33	44.424	2.912
FW	Lovelace	sat3	0.1	4077.333	1834		48				
FW	Lovelace	sat3	0.1	4077.333	1824		67				
FW	Lovelace	sat3	0.3	11733.67	3408	3934.33	528	583.00	3351.33	28.562	14.818
FW	Lovelace	sat3	0.3	11733.67	4195						
FW	Lovelace	sat3	0.3	11733.67	4200		638				
FW	Lovelace	sat3	0.6	23167.67	6955	7212.67	1358	1507.00	5705.67	24.628	20.894
FW	Lovelace	sat3	0.6	23167.67	7181		1771				
FW	Lovelace	sat3	0.6	23167.67	7502		1392				
FW	Lovelace	sat3	1	37799	9802	9366.33	725	765.50	8600.83	22.754	8.173
FW	Lovelace	sat3	1	37799	9211						
FW	Lovelace	sat3	1	37799	9086		806				
FW	Lovelace	sat3	3	116794.3	12461	12252.67	1320	1292.67	10960.00	9.384	10.550
FW	Lovelace	sat3	3	116794.3	11990		1387				
FW	Lovelace	sat3	3	116794.3	12307		1171				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Lovelace	sat4	0.03	1388	902	783.67	38	12.67	771.00	55.548	1.616
FW	Lovelace	sat4	0.03	1388	806		0				
FW	Lovelace	sat4	0.03	1388	643		0				
FW	Lovelace	sat4	0.06	2761.333	1426	1330.00	48	80.00	1250.00	45.268	6.015
FW	Lovelace	sat4	0.06	2761.333	1282		149				
FW	Lovelace	sat4	0.06	2761.333	1282		43				
FW	Lovelace	sat4	0.08	3132		1917.50	53	65.00	1852.50	59.148	3.390
FW	Lovelace	sat4	0.08	3132	1939		77				
FW	Lovelace	sat4	0.08	3132	1896						
FW	Lovelace	sat4	0.1	4288		2541.50	269	158.67	2382.83	55.570	6.243
FW	Lovelace	sat4	0.1	4288	2640		101				
FW	Lovelace	sat4	0.1	4288	2443		106				
FW	Lovelace	sat4	0.3	12897.33	4536	4937.67	259	254.33	4683.33	36.312	5.151
FW	Lovelace	sat4	0.3	12897.33	5213		216				
FW	Lovelace	sat4	0.3	12897.33	5064		288				
FW	Lovelace	sat4	0.6	25468.67	9926	9825.67	408	483.33	9342.33	36.682	4.919
FW	Lovelace	sat4	0.6	25468.67	9946		504				
FW	Lovelace	sat4	0.6	25468.67	9605		538				
FW	Lovelace	sat4	1	41951.33	13498	13217.67	816	761.67	12456.00	29.692	5.762
FW	Lovelace	sat4	1	41951.33	12725		749				
FW	Lovelace	sat4	1	41951.33	13430		720				
FW	Lovelace	sat4	3	121384	16819	17144.00	1594	1576.00	15568.00	12.825	9.193
FW	Lovelace	sat4	3	121384	17112		1632				
FW	Lovelace	sat4	3	121384	17501		1502				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Lovelace	sat5	0.03	1384	830	772.67	24	27.33	745.33	53.854	3.538
FW	Lovelace	sat5	0.03	1384	792		34				
FW	Lovelace	sat5	0.03	1384	696		24				
FW	Lovelace	sat5	0.06	2563.333	1786	1747.33		9.50	1737.83	67.796	0.544
FW	Lovelace	sat5	0.06	2563.333	1680		0				
FW	Lovelace	sat5	0.06	2563.333	1776		19				
FW	Lovelace	sat5	0.08	3347	2189	2211.33	48	59.33	2152.00	64.296	2.683
FW	Lovelace	sat5	0.08	3347	2155		72				
FW	Lovelace	sat5	0.08	3347	2290		58				
FW	Lovelace	sat5	0.1	4359.667	2933	3048.00	43	39.67	3008.33	69.004	1.301
FW	Lovelace	sat5	0.1	4359.667	2808		38				
FW	Lovelace	sat5	0.1	4359.667	3403		38				
FW	Lovelace	sat5	0.3	12352.33	6384	7614.33	168	209.67	7404.67	59.946	2.754
FW	Lovelace	sat5	0.3	12352.33	7435		221				
FW	Lovelace	sat5	0.3	12352.33	9024		240				
FW	Lovelace	sat5	0.6	23835	11155	11116.67	389	456.00	10660.67	44.727	4.102
FW	Lovelace	sat5	0.6	23835	11477		422				
FW	Lovelace	sat5	0.6	23835	10718		557				
FW	Lovelace	sat5	1	39708.67	13277	13803.33	542	523.00	13280.33	33.444	3.789
FW	Lovelace	sat5	1	39708.67	13843		494				
FW	Lovelace	sat5	1	39708.67	14290		533				
FW	Lovelace	sat5	3	113625.3	15720	16782.33	1421	1315.50	15466.83	13.612	7.839
FW	Lovelace	sat5	3	113625.3	17477		1210				
FW	Lovelace	sat5	3	113625.3	17150						

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Missouri	1012	0.03	1186.231	424	383.00	0	0.00	383.00	32.287	0.000
FW	Missouri	1012	0.03	1186.231	336		0				
FW	Missouri	1012	0.03	1186.231	389						
FW	Missouri	1012	0.06	2235.589	831	872.00	0	0.00	872.00	39.005	0.000
FW	Missouri	1012	0.06	2235.589	831		0				
FW	Missouri	1012	0.06	2235.589	954		0				
FW	Missouri	1012	0.08	3148.074	1096	1131.00	18	12.00	1119.00	35.546	1.061
FW	Missouri	1012	0.08	3148.074	1131		18				
FW	Missouri	1012	0.08	3148.074	1166		0				
FW	Missouri	1012	0.1	4161.413	1396	1449.00	18	29.67	1419.33	34.107	2.047
FW	Missouri	1012	0.1	4161.413	1502		53				
FW	Missouri	1012	0.1	4161.413			18				
FW	Missouri	1012	0.3	10685.68	3588	3611.33	71	88.67	3522.67	32.966	2.455
FW	Missouri	1012	0.3	10685.68	3747		71				
FW	Missouri	1012	0.3	10685.68	3499		124				
FW	Missouri	1012	0.6	22219.02	6522	6604.33	177	194.33	6410.00	28.849	2.943
FW	Missouri	1012	0.6	22219.02	6469		194				
FW	Missouri	1012	0.6	22219.02	6822		212				
FW	Missouri	1012	1	39529.82	9208	9149.33	283	306.33	8843.00	22.370	3.348
FW	Missouri	1012	1	39529.82	9226		283				
FW	Missouri	1012	1	39529.82	9014		353				
FW	Missouri	1012	3	111880.3	12248	12124.33	901	854.00	11270.33	10.074	7.044
FW	Missouri	1012	3	111880.3	12018		795				
FW	Missouri	1012	3	111880.3	12107		866				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Missouri	1013	0.03	1112.837	372	394.67	17	11.33	383.33	34.446	2.872
FW	Missouri	1013	0.03	1112.837	406		17				
FW	Missouri	1013	0.03	1112.837	406		0				
FW	Missouri	1013	0.06	2274.978	778	845.33	34	28.33	817.00	35.912	3.352
FW	Missouri	1013	0.06	2274.978	879		34				
FW	Missouri	1013	0.06	2274.978	879		17				
FW	Missouri	1013	0.08	3000.435	1065	1053.67	85	90.33	963.33	32.106	8.573
FW	Missouri	1013	0.08	3000.435	1014		85				
FW	Missouri	1013	0.08	3000.435	1082		101				
FW	Missouri	1013	0.1	3850.323	1285	1302.00	169	84.67	1217.33	31.616	6.503
FW	Missouri	1013	0.1	3850.323	1302		68				
FW	Missouri	1013	0.1	3850.323	1319		17				
FW	Missouri	1013	0.3	10722.21	3077	3296.33	85	101.33	3195.00	29.798	3.074
FW	Missouri	1013	0.3	10722.21	3296		118				
FW	Missouri	1013	0.3	10722.21	3516		101				
FW	Missouri	1013	0.6	24261.73	5984	6254.33	237	197.33	6057.00	24.965	3.155
FW	Missouri	1013	0.6	24261.73	6322		186				
FW	Missouri	1013	0.6	24261.73	6457		169				
FW	Missouri	1013	1	49173.79	8739	8964.67	372	366.33	8598.33	17.486	4.086
FW	Missouri	1013	1	49173.79	8587		372				
FW	Missouri	1013	1	49173.79	9568		355				
FW	Missouri	1013	3	116373.7	11123	10953.67	778	980.33	9973.33	8.570	8.950
FW	Missouri	1013	3	116373.7	10734		1183				
FW	Missouri	1013	3	116373.7	11004		980				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Missouri	1016	0.03	1311.894	369	341.67	0	0.00	341.67	26.044	0.000
FW	Missouri	1016	0.03	1311.894	287		0				
FW	Missouri	1016	0.03	1311.894	369		0				
FW	Missouri	1016	0.06	2364.823	738	710.67	0	0.00	710.67	30.052	0.000
FW	Missouri	1016	0.06	2364.823	697		0				
FW	Missouri	1016	0.06	2364.823	697		0				
FW	Missouri	1016	0.08	3235.625	1229	1242.67	41	68.33	1174.33	36.294	5.499
FW	Missouri	1016	0.08	3235.625	1270		41				
FW	Missouri	1016	0.08	3235.625	1229		123				
FW	Missouri	1016	0.1	3682.408	1516	1447.67	82	41.00	1406.67	38.200	2.832
FW	Missouri	1016	0.1	3682.408	1352		0				
FW	Missouri	1016	0.1	3682.408	1475		41				
FW	Missouri	1016	0.3	10961.85	2787	2718.67	205	191.33	2527.33	23.056	7.038
FW	Missouri	1016	0.3	10961.85	2705		164				
FW	Missouri	1016	0.3	10961.85	2664		205				
FW	Missouri	1016	0.6	22356.26	5532	5819.00	410	437.33	5381.67	24.072	7.516
FW	Missouri	1016	0.6	22356.26	5942		451				
FW	Missouri	1016	0.6	22356.26	5983		451				
FW	Missouri	1016	1	40583.33	7704	7471.67	820	820.00	6651.67	16.390	10.975
FW	Missouri	1016	1	40583.33	7253		820				
FW	Missouri	1016	1	40583.33	7458		820				
FW	Missouri	1016	3	113323.7	14466	13359.33	3032	2827.67	10531.67	9.293	21.166
FW	Missouri	1016	3	113323.7	13236		2705				
FW	Missouri	1016	3	113323.7	12376		2746				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Missouri	1017	0.03	1323.573	277	251.00	0	0.00	251.00	18.964	0.000
FW	Missouri	1017	0.03	1323.573	238		0				
FW	Missouri	1017	0.03	1323.573	238		0				
FW	Missouri	1017	0.06	2242.644	594	567.67	0	0.00	567.67	25.312	0.000
FW	Missouri	1017	0.06	2242.644	515		0				
FW	Missouri	1017	0.06	2242.644	594		0				
FW	Missouri	1017	0.08	3026.882	832	858.67	40	53.00	805.67	26.617	6.172
FW	Missouri	1017	0.08	3026.882	872		119				
FW	Missouri	1017	0.08	3026.882	872		0				
FW	Missouri	1017	0.1	4193.607	991	924.67	0	13.33	911.33	21.731	1.442
FW	Missouri	1017	0.1	4193.607	832		40				
FW	Missouri	1017	0.1	4193.607	951		0				
FW	Missouri	1017	0.3	10921.54	2615	2628.33	158	158.33	2470.00	22.616	6.024
FW	Missouri	1017	0.3	10921.54	2694		198				
FW	Missouri	1017	0.3	10921.54	2576		119				
FW	Missouri	1017	0.6	23276.72	5547	5547.33	475	435.67	5111.67	21.960	7.854
FW	Missouri	1017	0.6	23276.72	5429		436				
FW	Missouri	1017	0.6	23276.72	5666		396				
FW	Missouri	1017	1	44189.72	7568	7436.00	674	713.33	6722.67	15.213	9.593
FW	Missouri	1017	1	44189.72	7489		674				
FW	Missouri	1017	1	44189.72	7251		792				
FW	Missouri	1017	3	113323.7	11650	11689.67	1902	2007.67	9682.00	8.544	17.175
FW	Missouri	1017	3	113323.7	11650		1981				
FW	Missouri	1017	3	113323.7	11769		2140				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Dietrich	4	0.03	1107.5	309	317.00	129	103.67	213.33	19.263	32.702
FW	Dietrich	4	0.03	1107.5	370		97				
FW	Dietrich	4	0.03	1107.5	272		85				
FW	Dietrich	4	0.06	2359.1	510	541.33	126	125.67	415.67	17.620	23.214
FW	Dietrich	4	0.06	2359.1	535		103				
FW	Dietrich	4	0.06	2359.1	579		148				
FW	Dietrich	4	0.08	2883.3	677	677.67	147	143.67	534.00	18.520	21.200
FW	Dietrich	4	0.08	2883.3	591		146				
FW	Dietrich	4	0.08	2883.3	765		138				
FW	Dietrich	4	0.1	3727.8	653	702.33	110	128.33	574.00	15.398	18.272
FW	Dietrich	4	0.1	3727.8	736		120				
FW	Dietrich	4	0.1	3727.8	718		155				
FW	Dietrich	4	0.3	11209	1730	1740.00	241	206.33	1533.67	13.682	11.858
FW	Dietrich	4	0.3	11209	1846		179				
FW	Dietrich	4	0.3	11209	1644		199				
FW	Dietrich	4	0.6	22179.4	2031	2244.67	326	350.33	1894.33	8.541	15.607
FW	Dietrich	4	0.6	22179.4	2448		329				
FW	Dietrich	4	0.6	22179.4	2255		396				
FW	Dietrich	4	1	36665.5	2914	2713.33	547	550.67	2162.67	5.898	20.295
FW	Dietrich	4	1	36665.5	2667		553				
FW	Dietrich	4	1	36665.5	2559		552				
FW	Dietrich	4	3	109971.5	3528	3846.00	1252	1329.67	2516.33	2.288	34.573
FW	Dietrich	4	3	109971.5	3842		1516				
FW	Dietrich	4	3	109971.5	4168		1221				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Dietrich	5b	0.03	1097.3	303	304.00	106	107.67	196.33	17.892	35.417
FW	Dietrich	5b	0.03	1097.3	269		94				
FW	Dietrich	5b	0.03	1097.3	340		123				
FW	Dietrich	5b	0.06	2205.5	478	534.67	117	129.00	405.67	18.393	24.127
FW	Dietrich	5b	0.06	2205.5	552		148				
FW	Dietrich	5b	0.06	2205.5	574		122				
FW	Dietrich	5b	0.08	2969.4	641	582.67	149	143.33	439.33	14.795	24.600
FW	Dietrich	5b	0.08	2969.4	487		149				
FW	Dietrich	5b	0.08	2969.4	620		132				
FW	Dietrich	5b	0.1	3596.2	775	706.67	170	184.33	522.33	14.525	26.085
FW	Dietrich	5b	0.1	3596.2	662		168				
FW	Dietrich	5b	0.1	3596.2	683		215				
FW	Dietrich	5b	0.3	9475	1503	1558.00	255	287.67	1270.33	13.407	18.464
FW	Dietrich	5b	0.3	9475	1551		288				
FW	Dietrich	5b	0.3	9475	1620		320				
FW	Dietrich	5b	0.6	22011.5	1804	1879.67	415	399.67	1480.00	6.724	21.263
FW	Dietrich	5b	0.6	22011.5	1804		361				
FW	Dietrich	5b	0.6	22011.5	2031		423				
FW	Dietrich	5b	1	36631.7	2379	2530.67	593	600.67	1930.00	5.269	23.736
FW	Dietrich	5b	1	36631.7	2653		489				
FW	Dietrich	5b	1	36631.7	2560		720				
FW	Dietrich	5b	3	110997.2	4193	3956.00	2188	1787.67	2168.33	1.954	45.189
FW	Dietrich	5b	3	110997.2	4089		1591				
FW	Dietrich	5b	3	110997.2	3586		1584				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Dietrich	6	0.03	1112.6	178	189.67	133	108.00	81.67	7.340	56.942
FW	Dietrich	6	0.03	1112.6	198		94				
FW	Dietrich	6	0.03	1112.6	193		97				
FW	Dietrich	6	0.06	2291	436	403.33	129	127.00	276.33	12.062	31.488
FW	Dietrich	6	0.06	2291	406		123				
FW	Dietrich	6	0.06	2291	368		129				
FW	Dietrich	6	0.08	2944.3	405	477.00	162	154.67	322.33	10.948	32.425
FW	Dietrich	6	0.08	2944.3	538		141				
FW	Dietrich	6	0.08	2944.3	488		161				
FW	Dietrich	6	0.1	3761	545	514.33	146	150.67	363.67	9.669	29.294
FW	Dietrich	6	0.1	3761	423		163				
FW	Dietrich	6	0.1	3761	575		143				
FW	Dietrich	6	0.3	11249.7	1356	1289.33	230	256.67	1032.67	9.180	19.907
FW	Dietrich	6	0.3	11249.7	1209		257				
FW	Dietrich	6	0.3	11249.7	1303		283				
FW	Dietrich	6	0.6	23753.2	2074	1903.67	483	518.33	1385.33	5.832	27.228
FW	Dietrich	6	0.6	23753.2	1800		479				
FW	Dietrich	6	0.6	23753.2	1837		593				
FW	Dietrich	6	1	37235.6	2322	2317.00	605	596.33	1720.67	4.621	25.737
FW	Dietrich	6	1	37235.6	2253		596				
FW	Dietrich	6	1	37235.6	2376		588				
FW	Dietrich	6	3	113781.3	4057	3933.67	1507	1616.33	2317.33	2.037	41.090
FW	Dietrich	6	3	113781.3	3976		1682				
FW	Dietrich	6	3	113781.3	3768		1660				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Dietrich	7-2	0.03	1148	366	339.00	93	90.33	248.67	21.661	26.647
FW	Dietrich	7-2	0.03	1148	312		112				
FW	Dietrich	7-2	0.03	1148			66				
FW	Dietrich	7-2	0.06	2198.1	559	594.33	86	76.33	518.00	23.566	12.844
FW	Dietrich	7-2	0.06	2198.1	589		59				
FW	Dietrich	7-2	0.06	2198.1	635		84				
FW	Dietrich	7-2	0.08	2770.7	710	734.33	56	68.67	665.67	24.025	9.351
FW	Dietrich	7-2	0.08	2770.7	728		66				
FW	Dietrich	7-2	0.08	2770.7	765		84				
FW	Dietrich	7-2	0.1	3706.4	953	918.67	91	96.33	822.33	22.187	10.486
FW	Dietrich	7-2	0.1	3706.4	740		89				
FW	Dietrich	7-2	0.1	3706.4	1063		109				
FW	Dietrich	7-2	0.3	10170	1947	1769.67	102	113.00	1656.67	16.290	6.385
FW	Dietrich	7-2	0.3	10170	1678		127				
FW	Dietrich	7-2	0.3	10170	1684		110				
FW	Dietrich	7-2	0.6	20757.9	3524	3370.67	185	221.00	3149.67	15.173	6.557
FW	Dietrich	7-2	0.6	20757.9	3344		225				
FW	Dietrich	7-2	0.6	20757.9	3244		253				
FW	Dietrich	7-2	1	39923.7	3876	3709.00	331	317.00	3392.00	8.496	8.547
FW	Dietrich	7-2	1	39923.7	3972		308				
FW	Dietrich	7-2	1	39923.7	3279		312				
FW	Dietrich	7-2	3	115293.1	4029	4108.00	653	669.00	3439.00	2.983	16.285
FW	Dietrich	7-2	3	115293.1	3832		588				
FW	Dietrich	7-2	3	115293.1	4463		766				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Freyberger	1	0.03	1156.741	602	655.00	230	254.00	401.00	34.666	38.779
FW	Freyberger	1	0.03	1156.741	673		266				
FW	Freyberger	1	0.03	1156.741	690		266				
FW	Freyberger	1	0.06	2323.317	1097	1126.67	336	306.67	820.00	35.294	27.219
FW	Freyberger	1	0.06	2323.317	1168		283				
FW	Freyberger	1	0.06	2323.317	1115		301				
FW	Freyberger	1	0.08	3175.2	1416	1427.67	336	342.00	1085.67	34.192	23.955
FW	Freyberger	1	0.08	3175.2	1345		354				
FW	Freyberger	1	0.08	3175.2	1522		336				
FW	Freyberger	1	0.1	4076.253	1682	1723.00	407	419.00	1304.00	31.990	24.318
FW	Freyberger	1	0.1	4076.253	1752		425				
FW	Freyberger	1	0.1	4076.253	1735		425				
FW	Freyberger	1	0.3	10833.54	4337	4449.00	584	619.33	3829.67	35.350	13.921
FW	Freyberger	1	0.3	10833.54	4478		637				
FW	Freyberger	1	0.3	10833.54	4532		637				
FW	Freyberger	1	0.6	22635.74	7594	7405.00	1151	1144.67	6260.33	27.657	15.458
FW	Freyberger	1	0.6	22635.74	7523		1168				
FW	Freyberger	1	0.6	22635.74	7098		1115				
FW	Freyberger	1	1	38348.25	10692	10597.33	2053	1829.00	8768.33	22.865	17.259
FW	Freyberger	1	1	38348.25	10267		1717				
FW	Freyberger	1	1	38348.25	10833		1717				
FW	Freyberger	1	3	116648.9	16834	16509.67	5027	5050.67	11459.00	9.823	30.592
FW	Freyberger	1	3	116648.9	16303		5293				
FW	Freyberger	1	3	116648.9	16392		4832				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Freyberger	2	0.03	1135.685	593	604.67	244	267.33	337.33	29.703	44.212
FW	Freyberger	2	0.03	1135.685	593		279				
FW	Freyberger	2	0.03	1135.685	628		279				
FW	Freyberger	2	0.06	2300.428	1046	999.67	314	290.67	709.00	30.820	29.076
FW	Freyberger	2	0.06	2300.428	994		296				
FW	Freyberger	2	0.06	2300.428	959		262				
FW	Freyberger	2	0.08	3076.52	1255	1278.67	314	331.33	947.33	30.792	25.912
FW	Freyberger	2	0.08	3076.52	1273		331				
FW	Freyberger	2	0.08	3076.52	1308		349				
FW	Freyberger	2	0.1	3887.724	1552	1528.33	384	366.33	1162.00	29.889	23.969
FW	Freyberger	2	0.1	3887.724	1534		366				
FW	Freyberger	2	0.1	3887.724	1499		349				
FW	Freyberger	2	0.3	10586.81	3748	3829.67	575	587.00	3242.67	30.629	15.328
FW	Freyberger	2	0.3	10586.81	3905		593				
FW	Freyberger	2	0.3	10586.81	3836		593				
FW	Freyberger	2	0.6	21941.24	6573	6520.67	976	1011.33	5509.33	25.109	15.510
FW	Freyberger	2	0.6	21941.24	6486		994				
FW	Freyberger	2	0.6	21941.24	6503		1064				
FW	Freyberger	2	1	37730.66	9066	9019.67	1499	1633.00	7386.67	19.577	18.105
FW	Freyberger	2	1	37730.66	9206		1674				
FW	Freyberger	2	1	37730.66	8787		1726				
FW	Freyberger	2	3	115023.8	14140	14326.00	4673	4544.67	9781.33	8.504	31.723
FW	Freyberger	2	3	115023.8	14663		4533				
FW	Freyberger	2	3	115023.8	14175		4428				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	Freyberger	3	0.03	1168.559	698	715.00	209	226.67	488.33	41.789	31.702
FW	Freyberger	3	0.03	1168.559	715		227				
FW	Freyberger	3	0.03	1168.559	732		244				
FW	Freyberger	3	0.06	2355.283	1238	1214.67	296	267.33	947.33	40.222	22.009
FW	Freyberger	3	0.06	2355.283	1203		262				
FW	Freyberger	3	0.06	2355.283	1203		244				
FW	Freyberger	3	0.08	3121.809	1535	1500.00	314	313.67	1186.33	38.001	20.911
FW	Freyberger	3	0.08	3121.809	1430		296				
FW	Freyberger	3	0.08	3121.809	1535		331				
FW	Freyberger	3	0.1	4063.922	1814	1749.67	366	348.67	1401.00	34.474	19.928
FW	Freyberger	3	0.1	4063.922	1761		366				
FW	Freyberger	3	0.1	4063.922	1674		314				
FW	Freyberger	3	0.3	10847.62	4708	4818.67	558	563.67	4255.00	39.225	11.698
FW	Freyberger	3	0.3	10847.62	4813		575				
FW	Freyberger	3	0.3	10847.62	4935		558				
FW	Freyberger	3	0.6	22904.97	8265	7951.33	994	982.67	6968.67	30.424	12.359
FW	Freyberger	3	0.6	22904.97	8265		977				
FW	Freyberger	3	0.6	22904.97	7324		977				
FW	Freyberger	3	1	38675.07	11125	10962.33	1465	1540.33	9422.00	24.362	14.051
FW	Freyberger	3	1	38675.07	10637		1517				
FW	Freyberger	3	1	38675.07	11125		1639				
FW	Freyberger	3	3	118673.6	16810	16455.33	4325	4272.33	12183.00	10.266	25.963
FW	Freyberger	3	3	118673.6	16984		4307				
FW	Freyberger	3	3	118673.6	15572		4185				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	JapanCERI	n-1	0.03	1726.667	648	689.67	115	118.33	571.33	33.089	17.158
FW	JapanCERI	n-1	0.03	1726.667	667		82				
FW	JapanCERI	n-1	0.03	1726.667	754		158				
FW	JapanCERI	n-1	0.06	3381	1430	1321.33	226	200.33	1121.00	33.156	15.161
FW	JapanCERI	n-1	0.06	3381	1142		202				
FW	JapanCERI	n-1	0.06	3381	1392		173				
FW	JapanCERI	n-1	0.08	4504.333	264	1219.33	226	233.67	985.67	21.883	19.163
FW	JapanCERI	n-1	0.08	4504.333	1690		216				
FW	JapanCERI	n-1	0.08	4504.333	1704		259				
FW	JapanCERI	n-1	0.1	5622.667	2174	2307.00	254	307.00	2000.00	35.570	13.307
FW	JapanCERI	n-1	0.1	5622.667	2419		317				
FW	JapanCERI	n-1	0.1	5622.667	2328		350				
FW	JapanCERI	n-1	0.3	16317	5674	5916.67	538	493.00	5423.67	33.239	8.332
FW	JapanCERI	n-1	0.3	16317	5774		456				
FW	JapanCERI	n-1	0.3	16317	6302		485				
FW	JapanCERI	n-1	0.6	33252.67	10138	9822.67	845	939.33	8883.33	26.715	9.563
FW	JapanCERI	n-1	0.6	33252.67	9360		936				
FW	JapanCERI	n-1	0.6	33252.67	9970		1037				
FW	JapanCERI	n-1	1	54747.67	13738	13744.33	1430	1464.00	12280.33	22.431	10.652
FW	JapanCERI	n-1	1	54747.67	13978		1426				
FW	JapanCERI	n-1	1	54747.67	13517		1536				
FW	JapanCERI	n-1	3	170253.7	21734	21331.00	4570	4579.33	16751.67	9.839	21.468
FW	JapanCERI	n-1	3	170253.7	21125		4512				
FW	JapanCERI	n-1	3	170253.7	21134		4656				

Saturation Binding Percentage Calculations-hrER ISR 2013

FW Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	JapanCERI	n-2	0.03	1587.333	638	676.67	77	121.67	555.00	34.964	17.980
FW	JapanCERI	n-2	0.03	1587.333	691		144				
FW	JapanCERI	n-2	0.03	1587.333	701		144				
FW	JapanCERI	n-2	0.06	3161.667	1066	1243.33	168	184.00	1059.33	33.506	14.799
FW	JapanCERI	n-2	0.06	3161.667	1272		168				
FW	JapanCERI	n-2	0.06	3161.667	1392		216				
FW	JapanCERI	n-2	0.08	4281	1598	1668.67	192	241.67	1427.00	33.333	14.483
FW	JapanCERI	n-2	0.08	4281	1661		283				
FW	JapanCERI	n-2	0.08	4281	1747		250				
FW	JapanCERI	n-2	0.1	5308.667	2098	2096.00	312	304.00	1792.00	33.756	14.504
FW	JapanCERI	n-2	0.1	5308.667	2227		288				
FW	JapanCERI	n-2	0.1	5308.667	1963		312				
FW	JapanCERI	n-2	0.3	16015.67	5314	5453.00	466	481.67	4971.33	31.040	8.833
FW	JapanCERI	n-2	0.3	16015.67	5515		437				
FW	JapanCERI	n-2	0.3	16015.67	5530		542				
FW	JapanCERI	n-2	0.6	32021.33	9427	9340.67	936	980.67	8360.00	26.108	10.499
FW	JapanCERI	n-2	0.6	32021.33	9341		1080				
FW	JapanCERI	n-2	0.6	32021.33	9254		926				
FW	JapanCERI	n-2	1	53835	12826	12685.00	1550	1583.67	11101.33	20.621	12.485
FW	JapanCERI	n-2	1	53835	13080		1670				
FW	JapanCERI	n-2	1	53835	12149		1531				
FW	JapanCERI	n-2	3	169569	19550	20198.33	4829	4757.00	15441.33	9.106	23.551
FW	JapanCERI	n-2	3	169569	20040		4709				
FW	JapanCERI	n-2	3	169569	21005		4733				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
FW	JapanCERI	n-3	0.03	1575.667	538	549.00	120	104.00	445.00	28.242	18.944
FW	JapanCERI	n-3	0.03	1575.667	533		96				
FW	JapanCERI	n-3	0.03	1575.667	576		96				
FW	JapanCERI	n-3	0.06	3031.667	979	964.67	197	168.00	796.67	26.278	17.415
FW	JapanCERI	n-3	0.06	3031.667	917		158				
FW	JapanCERI	n-3	0.06	3031.667	998		149				
FW	JapanCERI	n-3	0.08	4110.667	1085	1160.33	250	265.67	894.67	21.765	22.896
FW	JapanCERI	n-3	0.08	4110.667	1258		235				
FW	JapanCERI	n-3	0.08	4110.667	1138		312				
FW	JapanCERI	n-3	0.1	5170.333	1714	1566.33	259	311.67	1254.67	24.267	19.898
FW	JapanCERI	n-3	0.1	5170.333	1531		326				
FW	JapanCERI	n-3	0.1	5170.333	1454		350				
FW	JapanCERI	n-3	0.3	15647.67	4224	3891.33	605	606.67	3284.67	20.991	15.590
FW	JapanCERI	n-3	0.3	15647.67	3773		610				
FW	JapanCERI	n-3	0.3	15647.67	3677		605				
FW	JapanCERI	n-3	0.6	31454	7238	7174.33	979	1046.33	6128.00	19.482	14.584
FW	JapanCERI	n-3	0.6	31454	7378		1022				
FW	JapanCERI	n-3	0.6	31454	6907		1138				
FW	JapanCERI	n-3	1	53891.67	10762	10462.33	1781	1875.33	8587.00	15.934	17.925
FW	JapanCERI	n-3	1	53891.67	10574		1930				
FW	JapanCERI	n-3	1	53891.67	10051		1915				
FW	JapanCERI	n-3	3	166867.7	19738	18979.33	5731	5267.00	13712.33	8.217	27.751
FW	JapanCERI	n-3	3	166867.7	16930		4790				
FW	JapanCERI	n-3	3	166867.7	20270		5280				

11:43 Thursday, September 19, 2013

Obs	LAB	RUN	ACCEPT	CHEM	BOTTOM	TOP	LOGIC50	ANTILOG	HILL	BIND
1	Ceetox	20090207	A/A	E2	2.84	107.00	-8.78	.000000002	-1.18	POS
2	Ceetox	20090208	A/A	E2	2.85	101.40	-8.77	.000000002	-1.16	POS
3	Ceetox	20090211	A/A	E2	3.41	109.50	-8.74	.000000002	-1.24	POS
4	Freyberg	B	A/A	E2	-0.49	101.00	-9.00	9.93E-10	-1.09	POS
5	Freyberg	C	A/A	E2	-0.53	99.55	-9.02	9.46E-10	-1.10	POS
6	Freyberg	D	A/A	E2	-0.26	99.27	-9.02	9.46E-10	-1.07	POS
7	Freyberg	E	A/A	E2	-1.39	102.70	-9.03	9.35E-10	-1.13	POS
8	Freyberg	F	A/A	E2	-0.61	102.80	-9.10	7.91E-10	-1.16	POS
9	Freyberg	G	A/A	E2	0.60	88.15	-8.95	.000000001	-1.59	POS
10	JapanCER	91224	A/A	E2	-0.93	92.45	-8.96	.000000001	-1.37	POS
11	JapanCER	100107	A/A	E2	-0.86	99.42	-8.99	.000000001	-1.42	POS
12	JapanCER	100108	A/A	E2	-3.53	101.80	-8.96	.000000001	-1.28	POS
13	Lovelace	13-Jan-0	A/A	E2	4.36	102.00	-9.29	5.15E-10	-1.14	POS
14	Lovelace	16-Jan-0	A/A	E2	-6.62	97.30	-9.48	3.35E-10	-0.76	POS
15	Lovelace	6-Jan-09	A/U	E2	7.57	160.60	-8.53	.000000003	-0.82	POS
16	Lovelace	8-Jan-09	U/A	E2	0.13	152.20	-9.43	3.7E-10	-0.55	POS
17	Missouri	4001	A/A	E2	-1.15	101.90	-9.13	7.48E-10	-0.80	POS
18	Missouri	4002	A/A	E2	0.86	105.70	-9.11	7.8E-10	-0.85	POS
19	Missouri	4003	A/A	E2	0.74	102.70	-8.85	.000000001	-1.21	POS
20	Missouri	4005	A/A	E2	-0.20	95.96	-9.13	7.36E-10	-1.06	POS
21	Missouri	4006	A/A	E2	-0.69	102.50	-9.08	8.3E-10	-1.03	POS
22	Missouri	4007	A/A	E2	0.45	95.29	-9.15	7.08E-10	-0.96	POS
23	Missouri	5003	A/A	E2	-1.04	94.90	-8.97	.000000001	-1.37	POS
24	Missouri	5010	A/A	E2	-1.60	100.40	-9.27	5.32E-10	-1.16	POS
25	Missouri	4001_2m	A/A	E2	0.38	88.43	-9.09	8.11E-10	-1.07	POS
26	Missouri	5005	A/U	E2	0.74	107.20	-8.91	.000000001	-1.39	POS
27	Missouri	5007stds		E2	1.33	100.20	-9.14	7.28E-10	-1.17	POS
28	Ceetox	20090207	A/A	NE	1.20	96.28	-5.94	.000001150	-0.86	POS
29	Ceetox	20090208	A/A	NE	2.71	94.59	-5.86	.000001400	-0.97	POS
30	Ceetox	20090211	A/A	NE	0.71	96.99	-5.73	.000001860	-0.96	POS
31	Freyberg	B	A/A	NE	-1.26	97.70	-6.32	.000000479	-0.95	POS
32	Freyberg	C	A/A	NE	-1.05	96.84	-6.39	.000000406	-0.96	POS
33	Freyberg	D	A/A	NE	-0.80	95.48	-6.49	.000000324	-1.02	POS
34	Freyberg	E	A/A	NE	-1.89	100.00	-6.55	.000000284	-1.01	POS
35	Freyberg	F	A/A	NE	-1.11	101.00	-6.58	.000000266	-1.02	POS
36	Freyberg	G	A/A	NE	-1.94	103.10	-6.56	.000000275	-1.02	POS
37	JapanCER	91224	A/A	NE	-7.02	97.85	-6.28	.000000521	-0.72	POS
38	JapanCER	100107	A/A	NE	-5.56	97.09	-6.16	.000000695	-0.88	POS
39	JapanCER	100108	A/A	NE	-4.65	100.40	-6.10	.000000791	-0.93	POS
40	Lovelace	13-Jan-0	A/A	NE	4.21	106.00	-6.00	.000000995	-0.92	POS
41	Lovelace	16-Jan-0	A/A	NE	-4.84	90.95	-6.20	.000000632	-0.86	POS
42	Lovelace	6-Jan-09	A/U	NE	-4.78	191.50	-5.59	.000002570	-0.78	POS
43	Lovelace	8-Jan-09	U/A	NE	-2.48	129.20	-6.03	.000000940	-0.80	POS
44	Missouri	4001	A/A	NE	2.03	107.40	-6.00	.000001000	-0.90	POS
45	Missouri	4002	A/A	NE	1.26	101.10	-6.03	.000000925	-1.01	POS
46	Missouri	4003	A/A	NE	10.18	113.60	-5.92	.000001210	-1.09	POS
47	Missouri	4005	A/A	NE	-3.78	104.70	-5.89	.000001300	-0.76	POS

11:43 Thursday, September 19, 2013

Obs	LAB	RUN	ACCEPT	CHEM	BOTTOM	TOP	LOGIC50	ANTILOG	HILL	BIND
48	Missouri	4006	A/A	NE	2.72	100.90	-5.90	.000001250	-1.10	POS
49	Missouri	4007	A/A	NE	0.44	95.21	-6.02	.000000948	-0.92	POS
50	Missouri	5003	A/A	NE	9.20	99.19	-6.44	.000000365	-0.85	POS
51	Missouri	5007	A/A	NE	6.31	104.00	-6.16	.000000687	-0.94	POS
52	Missouri	5010	A/A	NE	-1.50	99.46	-6.69	.000000202	-1.06	POS
53	Missouri	4001_2m	A/A	NE	0.54	103.70	-6.03	.000000927	-0.84	POS
54	Missouri	5005	A/U	NE	-3.31	108.80	-6.03	.000000925	-0.66	POS

CERI ASSAY PRISM FIT PARAMETERS SUB TASK 1

3

11:43 Thursday, September 19, 2013

----- CHEM=E2 LAB=Ceetox -----

The MEANS Procedure

Variable	Mean	N	Std Dev	Std Error
BOTTOM	3.0333333	3	0.3262412	0.1883555
TOP	105.9666667	3	4.1476901	2.3946700
LOGIC50	-8.7633333	3	0.0208167	0.0120185
ANTILOG	1.72E-9	3	9.848858E-11	5.686241E-11
HILL	-1.1933333	3	0.0416333	0.0240370

----- CHEM=E2 LAB=Freyberg -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	-0.4466667	6	0.6412072	0.2617717
TOP	98.9116667	6	5.4805307	2.2374173
LOGIC50	-9.0200000	6	0.0485798	0.0198326
ANTILOG	9.568333E-10	6	1.090934E-10	4.453719E-11
HILL	-1.1900000	6	0.1984943	0.0810350

----- CHEM=E2 LAB=JapanCER -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	-1.7733333	3	1.5217205	0.8785658
TOP	97.8900000	3	4.8591460	2.8054293
LOGIC50	-8.9700000	3	0.0173205	0.0100000
ANTILOG	1.0766667E-9	3	4.041452E-11	2.333333E-11
HILL	-1.3566667	3	0.0709460	0.0409607

----- CHEM=E2 LAB=Lovelace -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	1.3600000	4	6.1307259	3.0653629
TOP	128.0250000	4	32.9994318	16.4997159

LOGIC50	-9.1825000	4	0.4423705	0.2211853
ANTILOG	1.0425E-9	4	1.2740519E-9	6.37026E-10
HILL	-0.8175000	4	0.2441823	0.1220912

CERI ASSAY PRISM FIT PARAMETERS SUB TASK 1

4

11:43 Thursday, September 19, 2013

----- CHEM=E2 LAB=Missouri -----

The MEANS Procedure

Variable	Mean	N	Std Dev	Std Error
BOTTOM	-0.0163636	11	0.9709714	0.2927589
TOP	99.5618182	11	5.4584665	1.6457896
LOGIC50	-9.0754545	11	0.1201136	0.0362156
ANTILOG	8.711818E-10	11	2.590864E-10	7.811749E-11
HILL	-1.0972727	11	0.1889492	0.0569703

----- CHEM=NE LAB=Ceetox -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	1.5400000	3	1.0424490	0.6018582
TOP	95.9533333	3	1.2328963	0.7118130
LOGIC50	-5.8433333	3	0.1059874	0.0611919
ANTILOG	1.47E-6	3	3.6013886E-7	2.0792627E-7
HILL	-0.9300000	3	0.0608276	0.0351188

----- CHEM=NE LAB=Freyberg -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	-1.3416667	6	0.4685047	0.1912662
TOP	99.0200000	6	2.8479326	1.1626636
LOGIC50	-6.4816667	6	0.1049603	0.0428499
ANTILOG	3.39E-7	6	8.5748469E-8	3.5006666E-8
HILL	-0.9966667	6	0.0326599	0.0133333

----- CHEM=NE LAB=JapanCER -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	-5.7433333	3	1.1955891	0.6902737
TOP	98.4466667	3	1.7337916	1.0010051
LOGIC50	-6.1800000	3	0.0916515	0.0529150
ANTILOG	6.69E-7	3	1.368649E-7	7.9018985E-8
HILL	-0.8433333	3	0.1096966	0.0633333

----- CHEM=NE LAB=Lovelace -----

The MEANS Procedure

Variable	Mean	N	Std Dev	Std Error
BOTTOM	-1.9725000	4	4.2655783	2.1327892
TOP	129.4125000	4	44.2809661	22.1404830
LOGIC50	-5.9550000	4	0.2587792	0.1293896
ANTILOG	1.28425E-6	4	8.7192445E-7	4.3596223E-7
HILL	-0.8400000	4	0.0632456	0.0316228

----- CHEM=NE LAB=Missouri -----

Variable	Mean	N	Std Dev	Std Error
BOTTOM	2.1900000	11	4.6520748	1.4026533
TOP	103.4600000	11	5.1299532	1.5467391
LOGIC50	-6.1009091	11	0.2479699	0.0747657
ANTILOG	8.8536364E-7	11	3.4775344E-7	1.0485161E-7
HILL	-0.9209091	11	0.1393883	0.0420271

CERI Assay

Page 1 of 9

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	CeeTox	20081031-3	0.0313	876	828	742.67	316	488.00	254.67	29.072	65.709
CERI	CeeTox	20081031-3	0.0313	876	768		612				
CERI	CeeTox	20081031-3	0.0313	876	632		536				
CERI	CeeTox	20081031-3	0.0625	1518	1168	1009.33	336	516.00	493.33	32.499	51.123
CERI	CeeTox	20081031-3	0.0625	1518	1048		624				
CERI	CeeTox	20081031-3	0.0625	1518	812		588				
CERI	CeeTox	20081031-3	0.125	2790	1660	1544.00	468	606.67	937.33	33.596	39.292
CERI	CeeTox	20081031-3	0.125	2790	1644		692				
CERI	CeeTox	20081031-3	0.125	2790	1328		660				
CERI	CeeTox	20081031-3	0.25	5288	2416	2262.67	736	873.33	1389.33	26.273	38.598
CERI	CeeTox	20081031-3	0.25	5288	2488		900				
CERI	CeeTox	20081031-3	0.25	5288	1884		984				
CERI	CeeTox	20081031-3	0.5	10483	3724	3510.67	1072	1326.67	2184.00	20.834	37.790
CERI	CeeTox	20081031-3	0.5	10483	3532		1372				
CERI	CeeTox	20081031-3	0.5	10483	3276		1536				
CERI	CeeTox	20081031-3	1	20097	5216	4926.67	1964	2162.67	2764.00	13.753	43.897
CERI	CeeTox	20081031-3	1	20097	5124		2080				
CERI	CeeTox	20081031-3	1	20097	4440		2444				
CERI	CeeTox	20081031-3	2	38569	7116	6896.00	3492	3717.33	3178.67	8.242	53.906
CERI	CeeTox	20081031-3	2	38569	7384		3696				
CERI	CeeTox	20081031-3	2	38569	6188		3964				
CERI	CeeTox	20081031-3	4	80485	12772	11929.33	6956	7120.00	4809.33	5.975	59.685
CERI	CeeTox	20081031-3	4	80485	12328		6912				
CERI	CeeTox	20081031-3	4	80485	10688		7492				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	CeeTox	20090122-4	0.0313	797	792	809.33	328	300.00	509.33	63.906	37.068
CERI	CeeTox	20090122-4	0.0313	797	780		460				
CERI	CeeTox	20090122-4	0.0313	797	856		112				
CERI	CeeTox	20090122-4	0.0625	1405	1200	1142.67	428	457.33	685.33	48.778	40.023
CERI	CeeTox	20090122-4	0.0625	1405	1112		684				
CERI	CeeTox	20090122-4	0.0625	1405	1116		260				
CERI	CeeTox	20090122-4	0.125	2489	1876	1865.33	476	484.00	1381.33	55.498	25.947
CERI	CeeTox	20090122-4	0.125	2489	1992		632				
CERI	CeeTox	20090122-4	0.125	2489	1728		344				
CERI	CeeTox	20090122-4	0.25	4774	3280	3216.00	576	594.67	2621.33	54.909	18.491
CERI	CeeTox	20090122-4	0.25	4774	3436		736				
CERI	CeeTox	20090122-4	0.25	4774	2932		472				
CERI	CeeTox	20090122-4	0.5	9269	5636	5420.00	828	853.33	4566.67	49.268	15.744
CERI	CeeTox	20090122-4	0.5	9269	5660		968				
CERI	CeeTox	20090122-4	0.5	9269	4964		764				
CERI	CeeTox	20090122-4	1	18320	8772	8425.33	1324	1152.00	7273.33	39.702	13.673
CERI	CeeTox	20090122-4	1	18320	8820		1176				
CERI	CeeTox	20090122-4	1	18320	7684		956				
CERI	CeeTox	20090122-4	2	36958	12388	11614.67	1976	1892.00	9722.67	26.307	16.290
CERI	CeeTox	20090122-4	2	36958	11852		1948				
CERI	CeeTox	20090122-4	2	36958	10604		1752				
CERI	CeeTox	20090122-4	4	77052	16232	15554.67	3656	3405.33	12149.33	15.768	21.893
CERI	CeeTox	20090122-4	4	77052	15996		3264				
CERI	CeeTox	20090122-4	4	77052	14436		3296				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Lovelace	C-sat3	0.0313	791	576	549.33	236	272.00	277.33	35.061	49.515
CERI	Lovelace	C-sat3	0.0313	791	580		232				
CERI	Lovelace	C-sat3	0.0313	791	492		348				
CERI	Lovelace	C-sat3	0.0625	1703	1132	1088.00	448	452.00	636.00	37.346	41.544
CERI	Lovelace	C-sat3	0.0625	1703	1112		484				
CERI	Lovelace	C-sat3	0.0625	1703	1020		424				
CERI	Lovelace	C-sat3	0.125	3314	2064	1905.33	568	677.33	1228.00	37.055	35.549
CERI	Lovelace	C-sat3	0.125	3314	2024		788				
CERI	Lovelace	C-sat3	0.125	3314	1628		676				
CERI	Lovelace	C-sat3	0.25	6563	3428	3329.33	1024	1026.67	2302.67	35.086	30.837
CERI	Lovelace	C-sat3	0.25	6563	3336		1056				
CERI	Lovelace	C-sat3	0.25	6563	3224		1000				
CERI	Lovelace	C-sat3	0.5	13201	5480	5357.33	1600	1842.67	3514.67	26.624	34.395
CERI	Lovelace	C-sat3	0.5	13201	5452		1780				
CERI	Lovelace	C-sat3	0.5	13201	5140		2148				
CERI	Lovelace	C-sat3	1	23955	7692	7588.00	3460	3428.00	4160.00	17.366	45.177
CERI	Lovelace	C-sat3	1	23955	7808		3508				
CERI	Lovelace	C-sat3	1	23955	7264		3316				
CERI	Lovelace	C-sat3	2	42751	12136	10908.00	5784	5884.00	5024.00	11.752	53.942
CERI	Lovelace	C-sat3	2	42751	11912		6072				
CERI	Lovelace	C-sat3	2	42751	8676		5796				
CERI	Lovelace	C-sat3	4	88727	18104	15733.33	11716	10102.67	5630.67	6.346	64.212
CERI	Lovelace	C-sat3	4	88727	16984		10152				
CERI	Lovelace	C-sat3	4	88727	12112		8440				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Lovelace	C-sat4	0.0313	976	680	732.00	224	300.00	432.00	44.262	40.984
CERI	Lovelace	C-sat4	0.0313	976	764		324				
CERI	Lovelace	C-sat4	0.0313	976	752		352				
CERI	Lovelace	C-sat4	0.0625	1993	1356	1250.67	340	370.67	880.00	44.155	29.638
CERI	Lovelace	C-sat4	0.0625	1993	1400		364				
CERI	Lovelace	C-sat4	0.0625	1993	996		408				
CERI	Lovelace	C-sat4	0.125	3305	2124	1861.33	608	637.33	1224.00	37.035	34.241
CERI	Lovelace	C-sat4	0.125	3305	1800		672				
CERI	Lovelace	C-sat4	0.125	3305	1660		632				
CERI	Lovelace	C-sat4	0.25	6165	3144	3186.67	920	992.00	2194.67	35.599	31.130
CERI	Lovelace	C-sat4	0.25	6165	2984		1052				
CERI	Lovelace	C-sat4	0.25	6165	3432		1004				
CERI	Lovelace	C-sat4	0.5	11859	5300	5686.67	1792	1732.00	3954.67	33.347	30.457
CERI	Lovelace	C-sat4	0.5	11859	5920		1636				
CERI	Lovelace	C-sat4	0.5	11859	5840		1768				
CERI	Lovelace	C-sat4	1	23065	8712	8309.33	3292	3238.67	5070.67	21.984	38.976
CERI	Lovelace	C-sat4	1	23065	7960		3064				
CERI	Lovelace	C-sat4	1	23065	8256		3360				
CERI	Lovelace	C-sat4	2	45085	12356	12529.33	5832	5930.67	6598.67	14.636	47.334
CERI	Lovelace	C-sat4	2	45085	12744		6008				
CERI	Lovelace	C-sat4	2	45085	12488		5952				
CERI	Lovelace	C-sat4	4	86385	17996	19818.67	9448	10570.67	9248.00	10.706	53.337
CERI	Lovelace	C-sat4	4	86385	20552		10920				
CERI	Lovelace	C-sat4	4	86385	20908		11344				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Lovelace	C-sat5	0.0313	1106	344	442.67	384	361.33	81.33	7.354	81.627
CERI	Lovelace	C-sat5	0.0313	1106	664		380				
CERI	Lovelace	C-sat5	0.0313	1106	320		320				
CERI	Lovelace	C-sat5	0.0625	1827	1172	1144.00	672	548.00	596.00	32.622	47.902
CERI	Lovelace	C-sat5	0.0625	1827	1176		472				
CERI	Lovelace	C-sat5	0.0625	1827	1084		500				
CERI	Lovelace	C-sat5	0.125	3274	1764	1958.67	608	706.67	1252.00	38.241	36.079
CERI	Lovelace	C-sat5	0.125	3274	2296		756				
CERI	Lovelace	C-sat5	0.125	3274	1816		756				
CERI	Lovelace	C-sat5	0.25	5881	3120	3197.33	1020	1041.33	2156.00	36.660	32.569
CERI	Lovelace	C-sat5	0.25	5881	3096		1024				
CERI	Lovelace	C-sat5	0.25	5881	3376		1080				
CERI	Lovelace	C-sat5	0.5	11365	4164	4653.33	1440	1541.33	3112.00	27.382	33.123
CERI	Lovelace	C-sat5	0.5	11365	4448		1488				
CERI	Lovelace	C-sat5	0.5	11365	5348		1696				
CERI	Lovelace	C-sat5	1	21695	8352	8580.00	2624	2773.33	5806.67	26.765	32.323
CERI	Lovelace	C-sat5	1	21695			2892				
CERI	Lovelace	C-sat5	1	21695	8808		2804				
CERI	Lovelace	C-sat5	2	43690	12392	12121.33	5172	5070.67	7050.67	16.138	41.833
CERI	Lovelace	C-sat5	2	43690	11492		4848				
CERI	Lovelace	C-sat5	2	43690	12480		5192				
CERI	Lovelace	C-sat5	4	84549	16160	17146.67	8124	8740.00	8406.67	9.943	50.972
CERI	Lovelace	C-sat5	4	84549	17244		8560				
CERI	Lovelace	C-sat5	4	84549	18036		9536				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Missouri	2001	0.0313	905	295	275.33	118	118.00	157.33	17.385	42.857
CERI	Missouri	2001	0.0313	905	295		118				
CERI	Missouri	2001	0.0313	905	236		118				
CERI	Missouri	2001	0.0625	1722	649	550.67	295	216.33	334.33	19.415	39.286
CERI	Missouri	2001	0.0625	1722	531		177				
CERI	Missouri	2001	0.0625	1722	472		177				
CERI	Missouri	2001	0.125	3266	1121	1180.00	177	236.00	944.00	28.904	20.000
CERI	Missouri	2001	0.125	3266	1239		354				
CERI	Missouri	2001	0.125	3266	1180		177				
CERI	Missouri	2001	0.25	6188	2125	2262.67	354	472.00	1790.67	28.938	20.860
CERI	Missouri	2001	0.25	6188	2715		413				
CERI	Missouri	2001	0.25	6188	1948		649				
CERI	Missouri	2001	0.5	11746	3896	3876.00	1771	1200.00	2676.00	22.782	30.960
CERI	Missouri	2001	0.5	11746	3777		1003				
CERI	Missouri	2001	0.5	11746	3955		826				
CERI	Missouri	2001	1	25714	6670	6512.33	2066	1889.00	4623.33	17.980	29.007
CERI	Missouri	2001	1	25714	6374		1830				
CERI	Missouri	2001	1	25714	6493		1771				
CERI	Missouri	2001	2	50406	9031	9306.33	3187	4220.00	5086.33	10.091	45.345
CERI	Missouri	2001	2	50406	9326		5253				
CERI	Missouri	2001	2	50406	9562						
CERI	Missouri	2001	4	93591	13221	13457.00	7673	8775.00	4682.00	5.003	65.208
CERI	Missouri	2001	4	93591	13221		9267				
CERI	Missouri	2001	4	93591	13929		9385				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Missouri	2005	0.0313	942	476	577.33	19	57.00	520.33	55.237	9.873
CERI	Missouri	2005	0.0313	942	666		95				
CERI	Missouri	2005	0.0313	942	590		57				
CERI	Missouri	2005	0.0625	1748	971	1021.67	19	69.67	952.00	54.462	6.819
CERI	Missouri	2005	0.0625	1748	1047		133				
CERI	Missouri	2005	0.0625	1748	1047		57				
CERI	Missouri	2005	0.125	3633	1809	1796.33	95	133.00	1663.33	45.784	7.404
CERI	Missouri	2005	0.125	3633	1809		171				
CERI	Missouri	2005	0.125	3633	1771		133				
CERI	Missouri	2005	0.25	6191	3141	3090.67	171	247.67	2843.00	45.921	8.013
CERI	Missouri	2005	0.25	6191	2913		286				
CERI	Missouri	2005	0.25	6191	3218		286				
CERI	Missouri	2005	0.5	11280	4626	5222.67	286	387.33	4835.33	42.866	7.416
CERI	Missouri	2005	0.5	11280	5502		362				
CERI	Missouri	2005	0.5	11280	5540		514				
CERI	Missouri	2005	1	27178	7977	8231.00	743	806.33	7424.67	27.319	9.796
CERI	Missouri	2005	1	27178	8396		857				
CERI	Missouri	2005	1	27178	8320		819				
CERI	Missouri	2005	2	49516	10300	10363.33	1276	1466.00	8897.33	17.969	14.146
CERI	Missouri	2005	2	49516	9919		1504				
CERI	Missouri	2005	2	49516	10871		1618				
CERI	Missouri	2005	4	97519	11785	11480.33	2837	2913.00	8567.33	8.785	25.374
CERI	Missouri	2005	4	97519	11633		2875				
CERI	Missouri	2005	4	97519	11023		3027				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Missouri	2008	0.0313	1437	1346	1155.00	200	314.67	840.33	58.478	27.244
CERI	Missouri	2008	0.0313	1437	1117		372				
CERI	Missouri	2008	0.0313	1437	1002		372				
CERI	Missouri	2008	0.0625	2181	1518	1594.33	200	238.67	1355.67	62.158	14.970
CERI	Missouri	2008	0.0625	2181	1690		258				
CERI	Missouri	2008	0.0625	2181	1575		258				
CERI	Missouri	2008	0.125	4377	2320	2625.00	258	219.33	2405.67	54.962	8.356
CERI	Missouri	2008	0.125	4377	2434		200				
CERI	Missouri	2008	0.125	4377	3121		200				
CERI	Missouri	2008	0.25	7555	4267	4248.00	315	429.67	3818.33	50.540	10.115
CERI	Missouri	2008	0.25	7555	4267		487				
CERI	Missouri	2008	0.25	7555	4210		487				
CERI	Missouri	2008	0.5	17149	7131	7054.33	888	1327.00	5727.33	33.397	18.811
CERI	Missouri	2008	0.5	17149	7188		945				
CERI	Missouri	2008	0.5	17149	6844		2148				
CERI	Missouri	2008	1	27305	10223	9440.67	888	1078.67	8362.00	30.624	11.426
CERI	Missouri	2008	1	27305	10338		1231				
CERI	Missouri	2008	1	27305	7761		1117				
CERI	Missouri	2008	2	56802	13431	12953.67	2262	2434.00	10519.67	18.520	18.790
CERI	Missouri	2008	2	56802	12973		2148				
CERI	Missouri	2008	2	56802	12457		2892				
CERI	Missouri	2008	4	91243	14576	14595.33	4210	4916.33	9679.00	10.608	33.684
CERI	Missouri	2008	4	91243	14290		4840				
CERI	Missouri	2008	4	91243	14920		5699				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Missouri	2009	0.0313	1168	693	807.00		7.00	800.00	68.493	0.867
CERI	Missouri	2009	0.0313	1168	821		7				
CERI	Missouri	2009	0.0313	1168	907		7				
CERI	Missouri	2009	0.0625	2089	1336	1364.33		28.50	1335.83	63.946	2.089
CERI	Missouri	2009	0.0625	2089	1421		7				
CERI	Missouri	2009	0.0625	2089	1336		50				
CERI	Missouri	2009	0.125	4175	2193	2178.67	93	121.33	2057.33	49.277	5.569
CERI	Missouri	2009	0.125	4175	2107		50				
CERI	Missouri	2009	0.125	4175	2236		221				
CERI	Missouri	2009	0.25	7375	3521	3764.00	350	278.33	3485.67	47.263	7.395
CERI	Missouri	2009	0.25	7375	4164		264				
CERI	Missouri	2009	0.25	7375	3607		221				
CERI	Missouri	2009	0.5	11675	6693	6621.33	821	707.00	5914.33	50.658	10.678
CERI	Missouri	2009	0.5	11675	7207		564				
CERI	Missouri	2009	0.5	11675	5964		736				
CERI	Missouri	2009	1	24231	9264	10092.33	950	1050.00	9042.33	37.317	10.404
CERI	Missouri	2009	1	24231	9778		1164				
CERI	Missouri	2009	1	24231	11235		1036				
CERI	Missouri	2009	2	46852	11364	11564.00	2021	2335.33	9228.67	19.697	20.195
CERI	Missouri	2009	2	46852	12864		2278				
CERI	Missouri	2009	2	46852	10464		2707				
CERI	Missouri	2009	4	91243	14321	14306.67	4164	5292.67	9014.00	9.879	36.994
CERI	Missouri	2009	4	91243	14835		5621				
CERI	Missouri	2009	4	91243	13764		6093				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Freyberger	1	0.0313	811	623	635.33	264	232.67	402.67	49.651	36.621
CERI	Freyberger	1	0.0313	811	623		226				
CERI	Freyberger	1	0.0313	811	660		208				
CERI	Freyberger	1	0.0625	1582	1094	1081.33	340	314.67	766.67	48.462	29.100
CERI	Freyberger	1	0.0625	1582	1075		302				
CERI	Freyberger	1	0.0625	1582	1075		302				
CERI	Freyberger	1	0.125	2994	1792	1855.33	472	434.00	1421.33	47.473	23.392
CERI	Freyberger	1	0.125	2994	1887		415				
CERI	Freyberger	1	0.125	2994	1887		415				
CERI	Freyberger	1	0.25	5924	3321	3327.00	698	654.00	2673.00	45.122	19.657
CERI	Freyberger	1	0.25	5924	3283		623				
CERI	Freyberger	1	0.25	5924	3377		641				
CERI	Freyberger	1	0.5	12729	6151	6213.67	1170	1170.00	5043.67	39.623	18.829
CERI	Freyberger	1	0.5	12729	6207		1189				
CERI	Freyberger	1	0.5	12729	6283		1151				
CERI	Freyberger	1	1	25263	9660	9974.33	1868	2012.67	7961.67	31.515	20.178
CERI	Freyberger	1	1	25263	10094		2038				
CERI	Freyberger	1	1	25263	10169		2132				
CERI	Freyberger	1	2	50174	14452	14464.67	3321	3509.67	10955.00	21.834	24.264
CERI	Freyberger	1	2	50174	14754		3585				
CERI	Freyberger	1	2	50174	14188		3623				
CERI	Freyberger	1	4	102006	18358	18779.33	6377	6628.67	12150.67	11.912	35.298
CERI	Freyberger	1	4	102006	19037		6509				
CERI	Freyberger	1	4	102006	18943		7000				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Freyberger	2	0.0313	874	455	461.67	317	277.33	184.33	21.091	60.072
CERI	Freyberger	2	0.0313	874	455		277				
CERI	Freyberger	2	0.0313	874	475		238				
CERI	Freyberger	2	0.0625	1653	713	726.00	376	343.33	382.67	23.150	47.291
CERI	Freyberger	2	0.0625	1653	713		337				
CERI	Freyberger	2	0.0625	1653	752		317				
CERI	Freyberger	2	0.125	3184	1247	1220.67	495	461.67	759.00	23.838	37.821
CERI	Freyberger	2	0.125	3184	1188		455				
CERI	Freyberger	2	0.125	3184	1227		435				
CERI	Freyberger	2	0.25	6094	2158	2157.67	732	686.00	1471.67	24.149	31.794
CERI	Freyberger	2	0.25	6094	2138		673				
CERI	Freyberger	2	0.25	6094	2177		653				
CERI	Freyberger	2	0.5	13183	3741	3734.67	1128	1207.33	2527.33	19.171	32.328
CERI	Freyberger	2	0.5	13183	3702		1247				
CERI	Freyberger	2	0.5	13183	3761		1247				
CERI	Freyberger	2	1	25783	6572	6578.33	2078	2144.00	4434.33	17.199	32.592
CERI	Freyberger	2	1	25783	6651		2177				
CERI	Freyberger	2	1	25783	6512		2177				
CERI	Freyberger	2	2	50830	10333	10451.67	3464	3681.67	6770.00	13.319	35.226
CERI	Freyberger	2	2	50830	10570		3820				
CERI	Freyberger	2	2	50830	10452		3761				
CERI	Freyberger	2	4	97189	15757	16047.00	6433	6690.67	9356.33	9.627	41.694
CERI	Freyberger	2	4	97189	16370		6849				
CERI	Freyberger	2	4	97189	16014		6790				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	Freyberger	3	0.0313	830	594	606.67	268	242.67	364.00	43.855	40.000
CERI	Freyberger	3	0.0313	830	613		230				
CERI	Freyberger	3	0.0313	830	613		230				
CERI	Freyberger	3	0.0625	1637	957	983.00	326	300.00	683.00	41.723	30.519
CERI	Freyberger	3	0.0625	1637	996		287				
CERI	Freyberger	3	0.0625	1637	996		287				
CERI	Freyberger	3	0.125	3121	1743	1768.33	460	434.00	1334.33	42.753	24.543
CERI	Freyberger	3	0.125	3121	1781		421				
CERI	Freyberger	3	0.125	3121	1781		421				
CERI	Freyberger	3	0.25	6150	3045	3134.33	670	644.67	2489.67	40.482	20.568
CERI	Freyberger	3	0.25	6150	3198		632				
CERI	Freyberger	3	0.25	6150	3160		632				
CERI	Freyberger	3	0.5	13054	5438	5559.67	1168	1168.00	4391.67	33.642	21.008
CERI	Freyberger	3	0.5	13054	5592		1168				
CERI	Freyberger	3	0.5	13054	5649		1168				
CERI	Freyberger	3	1	26066	9536	9293.67	1915	1991.67	7302.00	28.014	21.430
CERI	Freyberger	3	1	26066	9230		2011				
CERI	Freyberger	3	1	26066	9115		2049				
CERI	Freyberger	3	2	50117	13481	13583.33	3294	3453.33	10130.00	20.213	25.423
CERI	Freyberger	3	2	50117	13711		3485				
CERI	Freyberger	3	2	50117	13558		3581				
CERI	Freyberger	3	4	97410	18652	18862.33	6549	6657.67	12204.67	12.529	35.296
CERI	Freyberger	3	4	97410	19283		6607				
CERI	Freyberger	3	4	97410	18652		6817				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	JapanCERI	n-1	0.0313	1099	608	669.33	190	204.67	464.67	42.281	30.578
CERI	JapanCERI	n-1	0.0313	1099	634		218				
CERI	JapanCERI	n-1	0.0313	1099	766		206				
CERI	JapanCERI	n-1	0.0625	2014	1262	1277.33	376	360.67	916.67	45.515	28.236
CERI	JapanCERI	n-1	0.0625	2014	1280		346				
CERI	JapanCERI	n-1	0.0625	2014	1290		360				
CERI	JapanCERI	n-1	0.125	4119	2486	2638.00	750	740.67	1897.33	46.063	28.077
CERI	JapanCERI	n-1	0.125	4119	2746		730				
CERI	JapanCERI	n-1	0.125	4119	2682		742				
CERI	JapanCERI	n-1	0.25	8111	5006	5172.00	1470	1412.67	3759.33	46.349	27.314
CERI	JapanCERI	n-1	0.25	8111	5204		1418				
CERI	JapanCERI	n-1	0.25	8111	5306		1350				
CERI	JapanCERI	n-1	0.5	16087	10086	10075.33	2852	2903.33	7172.00	44.583	28.816
CERI	JapanCERI	n-1	0.5	16087	10092		2938				
CERI	JapanCERI	n-1	0.5	16087	10048		2920				
CERI	JapanCERI	n-1	1	33699	19020	18948.00	5874	5936.67	13011.33	38.610	31.331
CERI	JapanCERI	n-1	1	33699	18990		6096				
CERI	JapanCERI	n-1	1	33699	18834		5840				
CERI	JapanCERI	n-1	2	66789	34030	33097.33	11232	11451.33	21646.00	32.410	34.599
CERI	JapanCERI	n-1	2	66789	32908		11442				
CERI	JapanCERI	n-1	2	66789	32354		11680				
CERI	JapanCERI	n-1	4	136866	46274	47386.00	22340	23546.00	23840.00	17.418	49.690
CERI	JapanCERI	n-1	4	136866	47218		23392				
CERI	JapanCERI	n-1	4	136866	48666		24906				
Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	JapanCERI	n-2	0.0313	1188	754	737.33	246	236.00	501.33	42.200	32.007
CERI	JapanCERI	n-2	0.0313	1188	696		220				
CERI	JapanCERI	n-2	0.0313	1188	762		242				
CERI	JapanCERI	n-2	0.0625	2376	1468	1449.33	428	392.67	1056.67	44.473	27.093
CERI	JapanCERI	n-2	0.0625	2376	1310		410				
CERI	JapanCERI	n-2	0.0625	2376	1570		340				
CERI	JapanCERI	n-2	0.125	4464	2774	2786.67	754	739.33	2047.33	45.863	26.531
CERI	JapanCERI	n-2	0.125	4464	2924		780				
CERI	JapanCERI	n-2	0.125	4464	2662		684				
CERI	JapanCERI	n-2	0.25	9024	5382	5526.00	1452	1388.00	4138.00	45.855	25.118
CERI	JapanCERI	n-2	0.25	9024	5498		1324				
CERI	JapanCERI	n-2	0.25	9024	5698		1388				
CERI	JapanCERI	n-2	0.5	18242	8844	10012.00	2658	2912.00	7100.00	38.921	29.085
CERI	JapanCERI	n-2	0.5	18242	10594		2998				
CERI	JapanCERI	n-2	0.5	18242	10598		3080				
CERI	JapanCERI	n-2	1	36127	18942	19766.67	5742	5890.00	13876.67	38.411	29.798
CERI	JapanCERI	n-2	1	36127	20266		5878				
CERI	JapanCERI	n-2	1	36127	20092		6050				
CERI	JapanCERI	n-2	2	70519	31892	32503.33	11546	11715.33	20788.00	29.479	36.043
CERI	JapanCERI	n-2	2	70519	31862		11822				
CERI	JapanCERI	n-2	2	70519	33756		11778				
CERI	JapanCERI	n-2	4	146109	50250	49468.00	24728	23884.67	25583.33	17.510	48.283
CERI	JapanCERI	n-2	4	146109	47444		23078				
CERI	JapanCERI	n-2	4	146109	50710		23848				

Saturation Binding Percentage Calculations-hrER ISR 2013

CERI Assay

Assay	LAB	Run ID	RAD Concentration	Total Added dpm	Total Bound dpm	Mean Total Bound	Non-Spec dpm	Mean Non-Spec	Mean Specific	Mean Specific/ Total Added (%)	Mean Non-Spec/ Total Bound (%)
CERI	JapanCERI	n-3	0.0313	1205	786	771.33	230	220.67	550.67	45.698	28.608
CERI	JapanCERI	n-3	0.0313	1205	782		226				
CERI	JapanCERI	n-3	0.0313	1205	746		206				
CERI	JapanCERI	n-3	0.0625	2158	1346	1365.33	430	404.00	961.33	44.547	29.590
CERI	JapanCERI	n-3	0.0625	2158	1372		402				
CERI	JapanCERI	n-3	0.0625	2158	1378		380				
CERI	JapanCERI	n-3	0.125	4553	2916	2780.67	802	780.67	2000.00	43.927	28.075
CERI	JapanCERI	n-3	0.125	4553	2726		768				
CERI	JapanCERI	n-3	0.125	4553	2700		772				
CERI	JapanCERI	n-3	0.25	8782	5528	5466.67	1448	1454.67	4012.00	45.684	26.610
CERI	JapanCERI	n-3	0.25	8782	5386		1434				
CERI	JapanCERI	n-3	0.25	8782	5486		1482				
CERI	JapanCERI	n-3	0.5	17864	11020	10644.00	2872	2940.00	7704.00	43.126	27.621
CERI	JapanCERI	n-3	0.5	17864	10374		3000				
CERI	JapanCERI	n-3	0.5	17864	10538		2948				
CERI	JapanCERI	n-3	1	34833	20040	19580.67	5806	5990.00	13590.67	39.017	30.591
CERI	JapanCERI	n-3	1	34833	19960		6054				
CERI	JapanCERI	n-3	1	34833	18742		6110				
CERI	JapanCERI	n-3	2	69737	33102	32122.00	11956	11584.00	20538.00	29.451	36.063
CERI	JapanCERI	n-3	2	69737	30730		11518				
CERI	JapanCERI	n-3	2	69737	32534		11278				
CERI	JapanCERI	n-3	4	145513	48400	48373.33	22586	22802.00	25571.33	17.573	47.138
CERI	JapanCERI	n-3	4	145513	47960		22742				
CERI	JapanCERI	n-3	4	145513	48760		23078				

Saturation Binding Data Tables Calculations- hrER ISR 2013

FW Specific Binding %

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6		
Run 1	27	33	22	23	22	6		
Run 2	21	30	17	20	21	5		
Run 3	23	23	16	24	16	5		
Run 4			15			8		
Mean	24	29	18	22	20	6	20	Overall Mean
STDEV	3.1	5.1	3.1	2.1	3.2	1.4	7.7	Overall STDEV

FW Non-Specific Binding %

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6		
Run 1	12	8	7	31	21	35		
Run 2	12	9	9	32	24	45		
Run 3	14	11	21	26	28	41		
Run 4			17			16		
Mean	13	9	14	30	24	34	21	Overall Mean
STDEV	1.2	1.5	6.6	3.2	3.5	12.8	10.2	Overall STDEV

FW Kd nM

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6		
Run 1	0.2982	0.3173	0.4811	0.3822	0.5398	0.1863		
Run 2	0.3047	0.3293	0.5038	0.3851	0.48	0.1464		
Run 3	0.3113	0.1831	0.8908	0.353	0.9104	0.3214		
Run 4			0.955			0.2675		
Mean	0.3047	0.2766	0.7077	0.3734	0.6434	0.2304	0.4227	Overall Mean
STDEV	0.0066	0.0812	0.2501	0.0178	0.2332	0.0789	0.2023	Overall STDEV

Saturation Binding Data Tables Calculations- hrER ISR 2013

FW Bmax

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6		
	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)		
Run 1	0.327	0.32	0.348	0.353	0.4	0.07		
Run 2	0.293	0.451	0.314	0.299	0.343	0.054		
Run 3	0.296	0.445	0.363	0.379	0.364	0.064		
Run 4			0.347			0.103		
Mean	0.305	0.405	0.343	0.344	0.369	0.073	0.307	Overall Mean
STDEV	0.0188	0.0740	0.0207	0.0408	0.0288	0.0212	0.1192	Overall STDEV

CERI Specific Binding %

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5		
Run 1	21	27	23	40	45		
Run 2	15	33	43	19	39		
Run 3	21	27	33	34	43		
Run 4	49		50				
Mean	27	29	37	31	42	33	Overall Mean
STDEV	15.3	3.5	11.8	10.8	3.1	5.4	Overall STDEV

CERI Non-specific Binding %

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5		
Run 1	60	64	65	35	50		
Run 2	50	53	25	42	48		
Run 3	60	51	34	35	47		
Run 4	22		37				
Mean	48	56	40	37	48	46	Overall Mean
STDEV	18.0	7.0	17.3	4.0	1.5	7.6	Overall STDEV

CERI Kd nM

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5		
Run 1	0.276	0.1477	0.4441	0.3811	0.555		
Run 2	0.5868	0.2337	0.2646	1.283	0.7355		
Run 3	0.1687	0.35	0.2606	0.6105	0.6124		
Run 4	0.2651		0.2036				
Mean	0.3242	0.2438	0.2932	0.7582	0.6343	0.4507	Overall Mean
STDEV	0.1816	0.1015	0.1044	0.4687	0.0922	0.1601	Overall STDEV

Saturation Binding Data Tables Calculations- hrER ISR 2013

CERI Bmax

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5		
	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)	B _{max} (nM)		
Run 1	0.278	0.248	0.302	0.595	1.041		
Run 2	0.349	0.357	0.414	0.552	1.133		
Run 3	0.187	0.428	0.484	0.63	1.03		
Run 4	0.561		0.453				
Mean	0.344	0.344	0.413	0.592	1.068	0.552	Overall Mean
STDEV	0.1593	0.0907	0.0795	0.0391	0.0566	0.0461	Overall STDEV