SAS (CHICKS ver. 3_1/modified by EPA/OSCP) Output

for the

Statistical Re-analysis

on the

“Draft Final Report on Avian Dosing Study, Battelle 30 June 2005”

performed by US-EPA, OSCP
28 October 2005

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Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE EL (Eggs Laid)

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Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.849	<.001	1.766	0.159	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	53.13	18.05	6.38	33.98	38.03, 68.22
0.078	8	51.00	12.20	4.31	23.92	40.80, 61.20
0.31	8	59.25	9.97	3.52	16.82	50.92, 67.58
1.25	7	63.14	5.21	1.97	8.25	58.32, 67.96
5	7	59.71	4.82	1.82	8.07	55.26, 64.17

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	59.50	12.00	69.00	.	.
0.078	54.50	27.00	65.00	96.00	4.00
0.31	59.50	37.00	70.00	111.53	-11.53
1.25	65.00	57.00	72.00	118.86	-18.86
5	59.00	52.00	67.00	112.40	-12.40

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	6.16	0.187

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	59.50	.	.
0.078	54.50	0.827	0.186
0.31	59.50	1.000	0.738
1.25	65.00	1.000	0.950
5	59.00	1.000	0.904

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE NEG_EC (Eggs Cracked)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.947	0.070	2.002	0.117	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	4.88	3.09	1.09	63.40	2.29, 7.46
0.078	8	7.63	8.02	2.83	105.14	0.92, 14.33
0.31	8	5.25	4.37	1.54	83.18	1.60, 8.90
1.25	7	6.86	5.15	1.94	75.04	2.10, 11.62
5	7	6.43	4.93	1.86	76.66	1.87, 10.99

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	5.00	0.00	9.00	.	.
0.078	5.50	0.00	22.00	156.41	-56.41
0.31	4.00	0.00	13.00	107.69	-7.69
1.25	7.00	1.00	16.00	140.66	-40.66
5	6.00	0.00	15.00	131.87	-31.87

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.35	0.840

Dunnett - testing each trt mean signif. greater than control
Williams - test assumes dose-response relationship, testing positive trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	4.88	.	4.88	.	0.843	1.000	0.952	0.980	.
0.078	7.63	0.373	6.44	0.337	.	0.901	0.999	0.993	.
0.31	5.25	0.757	6.44	0.361	.	.	0.978	0.993	.
1.25	6.86	0.512	6.64	0.351	.	.	.	1.000	.
5	6.43	0.582	6.64	0.358	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE ENC_EL ((EL-EC)/EL (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.839	<.001	1.830	0.147	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	85.23	21.43	7.58	25.15	67.31, 100.00
0.078	8	84.15	16.85	5.96	20.02	70.07, 98.24
0.31	8	91.54	6.19	2.19	6.76	86.37, 96.72
1.25	7	89.27	7.89	2.98	8.84	81.97, 96.57
5	7	89.13	8.65	3.27	9.71	81.12, 97.13

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	91.41	33.33	100.00	.	.
0.078	90.52	57.69	100.00	98.73	1.27
0.31	93.22	81.43	100.00	107.41	-7.41
1.25	88.33	75.38	98.46	104.74	-4.74
5	90.48	73.68	100.00	104.57	-4.57

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	0.47	0.976

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	91.41	.	.
0.078	90.52	1.000	0.437
0.31	93.22	1.000	0.635
1.25	88.33	1.000	0.535
5	90.48	1.000	0.464

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE VE_ES (ViableEmbryo/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.807	<.001	0.076	0.989	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	78.57	39.34	14.87	50.07	42.19, 100.00
0.078	7	70.24	37.22	14.07	53.00	35.81, 100.00
0.31	8	65.21	36.36	12.85	55.75	34.81, 95.60
1.25	7	78.57	39.34	14.87	50.07	42.19, 100.00
5	7	72.62	40.46	15.29	55.71	35.20, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	0.00	100.00	.	.
0.078	100.00	25.00	100.00	89.39	10.61
0.31	70.83	0.00	100.00	82.99	17.01
1.25	100.00	0.00	100.00	100.00	0.00
5	100.00	0.00	100.00	92.42	7.58

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.37	0.849

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.301
0.31	70.83	0.723	0.205
1.25	100.00	1.000	0.483
5	100.00	1.000	0.469

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE LE_VE (LiveEmbryo/ViableEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.748	<.001	12.446	<.001	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	100.00	0.00	0.00	0.00	. , .
0.078	7	76.19	41.79	15.79	54.84	37.55, 100.00
0.31	7	100.00	0.00	0.00	0.00	. , .
1.25	6	92.50	11.73	4.79	12.68	80.19, 100.00
5	6	94.44	13.61	5.56	14.41	80.16, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	100.00	100.00	.	.
0.078	100.00	0.00	100.00	76.19	23.81
0.31	100.00	100.00	100.00	100.00	0.00
1.25	100.00	75.00	100.00	92.50	7.50
5	100.00	66.67	100.00	94.44	5.56

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	4.49	0.344

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.086
0.31	100.00	1.000	0.553
1.25	100.00	1.000	0.211
5	100.00	1.000	0.264

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE NH_ES (NumberHatched/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.935	0.036	0.339	0.849	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	65.00	40.72	15.39	62.65	27.34, 100.00
0.078	7	44.05	42.14	15.93	95.67	5.07, 83.02
0.31	8	62.71	34.25	12.11	54.62	34.08, 91.34
1.25	7	68.57	34.73	13.13	50.64	36.45, 100.00
5	7	65.48	39.21	14.82	59.89	29.21, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	80.00	0.00	100.00	.	.
0.078	33.33	0.00	100.00	67.77	32.23
0.31	70.83	0.00	100.00	96.47	3.53
1.25	75.00	0.00	100.00	105.49	-5.49
5	75.00	0.00	100.00	100.73	-0.73

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	31	0.46	0.764

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	65.00	.	65.00	.	0.842	1.000	1.000	1.000	.
0.078	44.05	0.365	60.29	0.484	.	0.878	0.751	0.831	.
0.31	62.71	0.757	60.29	0.511	.	.	0.998	1.000	.
1.25	68.57	0.850	60.29	0.532	.	.	.	1.000	.
5	65.48	0.805	60.29	0.543	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE NH_LE (NumberHatched/LiveEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.809	<.001	7.115	<.001	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	80.00	24.49	10.00	30.62	54.29, 100.00
0.078	6	75.00	41.83	17.08	55.78	31.10, 100.00
0.31	7	97.14	7.56	2.86	7.78	90.15, 100.00
1.25	6	95.83	10.21	4.17	10.65	85.12, 100.00
5	6	95.83	10.21	4.17	10.65	85.12, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	90.00	50.00	100.00	.	.
0.078	100.00	0.00	100.00	93.75	6.25
0.31	100.00	80.00	100.00	121.43	-21.43
1.25	100.00	75.00	100.00	119.79	-19.79
5	100.00	75.00	100.00	119.79	-19.79

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.54	0.472

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	90.00	.	.
0.078	100.00	1.000	0.571
0.31	100.00	1.000	0.907
1.25	100.00	1.000	0.930
5	100.00	1.000	0.936

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE HS_ES (HatchlingSurvival/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.930	0.049	0.979	0.437	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	75.83	31.69	12.94	41.79	42.58, 100.00
0.078	5	55.00	29.81	13.33	54.21	17.98, 92.02
0.31	7	71.67	24.89	9.41	34.73	48.65, 94.68
1.25	6	52.22	31.30	12.78	59.93	19.38, 85.07
5	6	66.67	43.78	17.87	65.67	20.72, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	90.00	25.00	100.00	.	.
0.078	50.00	25.00	100.00	72.53	27.47
0.31	75.00	40.00	100.00	94.51	5.49
1.25	62.50	0.00	80.00	68.86	31.14
5	87.50	0.00	100.00	87.91	12.09

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	0.59	0.676

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	75.83	.	75.83	.	0.829	0.999	0.723	0.988	.
0.078	55.00	0.358	64.72	0.346	.	0.905	1.000	0.976	.
0.31	71.67	0.718	64.72	0.349	.	.	0.821	0.999	.
1.25	52.22	0.280	59.44	0.261	.	.	.	0.938	.
5	66.67	0.611	59.44	0.266	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE HS_NH (HatchlingSurvival/NumberHatched (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.786	<.001	12.425	<.001	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	100.00	0.00	0.00	0.00	. , .
0.078	5	93.33	14.91	6.67	15.97	74.82, 100.00
0.31	7	100.00	0.00	0.00	0.00	. , .
1.25	6	72.22	44.31	18.09	61.35	25.73, 100.00
5	6	75.00	41.83	17.08	55.78	31.10, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	100.00	100.00	.	.
0.078	100.00	66.67	100.00	93.33	6.67
0.31	100.00	100.00	100.00	100.00	0.00
1.25	100.00	0.00	100.00	72.22	27.78
5	100.00	0.00	100.00	75.00	25.00

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.11	0.277

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.137
0.31	100.00	1.000	0.541
1.25	100.00	1.000	0.082
5	100.00	1.000	0.040

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	1.25	5

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE THICK (Eggshell thickness)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.980	0.686	1.553	0.209	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	0.21	0.02	0.01	9.94	0.19, 0.22
0.078	8	0.22	0.03	0.01	12.11	0.20, 0.24
0.31	8	0.22	0.01	0.01	6.53	0.21, 0.23
1.25	8	0.21	0.02	0.01	8.07	0.19, 0.22
5	7	0.22	0.01	0.00	5.57	0.21, 0.23

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.21	0.17	0.23	.	.
0.078	0.22	0.19	0.25	106.10	-6.10
0.31	0.21	0.20	0.24	105.63	-5.63
1.25	0.20	0.19	0.24	101.03	-1.03
5	0.22	0.20	0.24	107.93	-7.93

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	34	1.08	0.382

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.21	.	0.21	.	0.675	0.736	0.999	0.465	.
0.078	0.22	0.991	0.21	0.880	.	1.000	0.802	0.995	.
0.31	0.22	0.988	0.21	0.904	.	.	0.852	0.988	.
1.25	0.21	0.867	0.21	0.916	.	.	.	0.598	.
5	0.22	0.997	0.21	0.918	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE HATWT (Hatchling Weight)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.982	0.887	0.981	0.436	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	9.35	1.07	0.44	11.43	8.23, 10.47
0.078	5	8.94	2.01	0.90	22.53	6.44, 11.44
0.31	7	9.37	0.94	0.36	10.04	8.50, 10.24
1.25	6	8.98	0.95	0.39	10.57	7.99, 9.98
5	6	8.47	1.57	0.64	18.56	6.82, 10.12

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	9.35	8.10	10.50	.	.
0.078	8.60	6.80	12.20	95.61	4.39
0.31	9.30	8.40	11.10	100.23	-0.23
1.25	9.00	7.70	10.30	96.08	3.92
5	8.90	6.20	10.40	90.55	9.45

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	0.48	0.750

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	9.35	.	9.35	.	0.986	1.000	0.989	0.778	.
0.078	8.94	0.600	9.19	0.498	.	0.980	1.000	0.976	.
0.31	9.37	0.810	9.19	0.522	.	.	0.984	0.738	.
1.25	8.98	0.614	8.98	0.419	.	.	.	0.960	.
5	8.47	0.318	8.47	0.174	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE SURVWT (Survivor Wt (d14))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.976	0.751	1.113	0.374	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	146.45	14.84	6.06	10.13	130.88, 162.02
0.078	5	150.38	16.04	7.17	10.66	130.47, 170.29
0.31	7	156.29	7.53	2.85	4.82	149.32, 163.25
1.25	5	158.84	7.90	3.53	4.97	149.03, 168.65
5	5	151.38	14.08	6.30	9.30	133.89, 168.87

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	144.05	128.40	169.40	.	.
0.078	146.80	128.20	167.00	102.68	-2.68
0.31	154.20	148.80	167.50	106.72	-6.72
1.25	156.80	149.30	167.80	108.46	-8.46
5	151.80	128.50	164.30	103.37	-3.37

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	23	0.90	0.481

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	146.45	.	152.99	.	0.984	0.615	0.479	0.963	.
0.078	150.38	0.931	152.99	0.877	.	0.923	0.814	1.000	.
0.31	156.29	0.994	152.99	0.915	.	.	0.996	0.959	.
1.25	158.84	0.997	152.99	0.914	.	.	.	0.872	.
5	151.38	0.949	151.38	0.877	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FOOD (Food Consumption)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.912	0.006	0.321	0.862	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	39.84	3.16	1.12	7.94	37.19, 42.48
0.078	8	38.24	4.82	1.71	12.62	34.20, 42.27
0.31	8	36.66	7.18	2.54	19.57	30.66, 42.66
1.25	7	40.03	4.35	1.64	10.85	36.01, 44.05
5	7	39.97	4.34	1.64	10.86	35.96, 43.98

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	41.15	34.70	43.20	.	.
0.078	37.80	32.90	45.90	95.98	4.02
0.31	38.60	19.50	42.20	92.03	7.97
1.25	40.80	34.50	46.40	100.48	-0.48
5	39.50	34.80	47.00	100.34	-0.34

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.66	0.798

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	41.15	.	.
0.078	37.80	0.886	0.200
0.31	38.60	0.772	0.191
1.25	40.80	1.000	0.472
5	39.50	1.000	0.611

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE WTGAINM (Male wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.906	0.004	1.383	0.261	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	73.48	28.43	10.05	38.69	49.71, 97.24
0.078	8	84.91	10.59	3.74	12.47	76.06, 93.76
0.31	8	80.94	28.99	10.25	35.82	56.70, 105.18
1.25	7	85.80	11.59	4.38	13.51	75.08, 96.52
5	7	94.07	26.29	9.94	27.95	69.76, 118.38

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	78.55	12.50	112.70	.	.
0.078	83.75	65.70	98.80	115.57	-15.57
0.31	84.65	15.40	108.80	110.16	-10.16
1.25	83.30	74.00	102.10	116.77	-16.77
5	106.30	55.00	124.90	128.03	-28.03

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.36	0.670

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	78.55	.	.
0.078	83.75	1.000	0.800
0.31	84.65	1.000	0.867
1.25	83.30	1.000	0.811
5	106.30	1.000	0.912

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE WTGAINF (Female wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.949	0.084	2.101	0.103	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	149.96	26.05	9.84	17.37	125.87, 174.04
0.078	8	135.33	17.44	6.17	12.89	120.74, 149.91
0.31	8	121.48	38.46	13.60	31.66	89.32, 153.63
1.25	8	135.48	11.27	3.98	8.32	126.06, 144.89
5	7	142.11	29.13	11.01	20.50	115.17, 169.06

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	156.10	118.10	182.40	.	.
0.078	134.15	102.90	160.30	90.24	9.76
0.31	132.75	42.70	154.90	81.01	18.99
1.25	137.20	121.70	152.30	90.34	9.66
5	136.90	98.50	182.30	94.77	5.23

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	1.21	0.324

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	149.96	.	149.96	.	0.814	0.242	0.820	0.980	.
0.078	135.33	0.337	135.33	0.171	.	0.825	1.000	0.987	.
0.31	121.48	0.065	132.63	0.132	.	.	0.820	0.554	.
1.25	135.48	0.342	132.63	0.136	.	.	.	0.988	.
5	142.11	0.566	132.63	0.149	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE EGGLAY (Days to onset of egg laying)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.959	0.170	1.456	0.238	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	43.63	6.23	2.20	14.29	38.41, 48.84
0.078	8	43.38	5.26	1.86	12.13	38.98, 47.77
0.31	8	40.63	3.54	1.25	8.72	37.66, 43.59
1.25	7	40.86	2.91	1.10	7.13	38.16, 43.55
5	7	40.71	2.69	1.02	6.61	38.23, 43.20

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	42.50	37.00	57.00	.	.
0.078	43.00	35.00	51.00	99.43	0.57
0.31	40.50	36.00	45.00	93.12	6.88
1.25	41.00	37.00	44.00	93.66	6.34
5	41.00	37.00	45.00	93.33	6.67

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.91	0.468

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	43.63	.	43.63	.	1.000	0.660	0.747	0.711	.
0.078	43.38	0.767	43.38	0.535	.	0.728	0.806	0.773	.
0.31	40.63	0.243	40.73	0.127	.	.	1.000	1.000	.
1.25	40.86	0.297	40.73	0.141	.	.	.	1.000	.
5	40.71	0.274	40.71	0.142	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FTIBL (Tibial length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.810	<.001	3.221	0.025	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	51.77	6.47	2.29	12.50	46.36, 57.19
0.078	8	54.95	1.85	0.65	3.36	53.41, 56.49
0.31	8	53.81	2.39	0.84	4.44	51.82, 55.81
1.25	6	55.39	2.00	0.82	3.62	53.28, 57.49
5	6	54.44	1.88	0.77	3.46	52.47, 56.42

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	54.79	37.22	56.16	.	.
0.078	54.04	53.43	58.30	106.13	-6.13
0.31	54.61	49.91	56.37	103.94	-3.94
1.25	55.03	52.44	58.16	106.98	-6.98
5	54.52	51.53	57.40	105.16	-5.16

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.59	0.811

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	54.79	.	.
0.078	54.04	1.000	0.700
0.31	54.61	1.000	0.604
1.25	55.03	1.000	0.823
5	54.52	1.000	0.712

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FTARL (Tarsal length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.971	0.479	5.817	0.001	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	32.24	2.21	0.83	6.84	30.20, 34.28
0.078	8	35.10	3.59	1.27	10.23	32.10, 38.11
0.31	8	32.93	2.52	0.89	7.67	30.82, 35.04
1.25	6	32.87	0.41	0.17	1.25	32.44, 33.30
5	6	34.18	1.33	0.54	3.89	32.79, 35.58

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	31.80	29.43	35.13	.	.
0.078	34.56	31.28	40.12	108.90	-8.90
0.31	32.95	29.72	36.90	102.15	-2.15
1.25	32.73	32.52	33.50	101.98	-1.98
5	33.60	32.86	35.92	106.04	-6.04

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	4.64	0.326

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	31.80	.	.
0.078	34.56	1.000	0.934
0.31	32.95	1.000	0.611
1.25	32.73	1.000	0.500
5	33.60	1.000	0.805

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FTIBD (Tibial diameter of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.953	0.131	1.360	0.270	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval	
0 ppm	8	3.25	0.57	0.20	17.67	2.77,	3.73
0.078	8	3.08	0.33	0.12	10.77	2.80,	3.35
0.31	8	3.22	0.42	0.15	12.98	2.87,	3.57
1.25	6	3.28	0.35	0.14	10.72	2.91,	3.65
5	6	3.05	0.26	0.11	8.48	2.78,	3.33

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.15	2.69	4.34	.	.
0.078	3.03	2.79	3.81	94.73	5.27
0.31	3.27	2.61	3.92	99.12	0.88
1.25	3.12	2.99	3.86	101.01	-1.01
5	3.10	2.65	3.42	93.98	6.02

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	31	0.43	0.785

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.25	.	3.25	.	0.919	1.000	1.000	0.902	.
0.078	3.08	0.463	3.19	0.450	.	0.957	0.888	1.000	.
0.31	3.22	0.764	3.19	0.479	.	.	0.999	0.943	.
1.25	3.28	0.855	3.19	0.506	.	.	.	0.870	.
5	3.05	0.442	3.05	0.261	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FTIBW (Tibial weight of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.949	0.097	0.796	0.537	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	1.36	0.20	0.07	14.41	1.20, 1.53
0.078	8	1.32	0.17	0.06	12.62	1.18, 1.46
0.31	8	1.38	0.30	0.10	21.56	1.13, 1.62
1.25	6	1.39	0.15	0.06	10.96	1.23, 1.55
5	6	1.21	0.16	0.06	12.96	1.05, 1.37

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.29	1.19	1.68	.	.
0.078	1.27	1.18	1.66	96.70	3.30
0.31	1.32	0.95	1.95	100.92	-0.92
1.25	1.42	1.15	1.56	102.26	-2.26
5	1.21	1.04	1.48	88.81	11.19

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	31	0.80	0.537

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.36	.	1.36	.	0.992	1.000	0.999	0.651	.
0.078	1.32	0.644	1.36	0.569	.	0.980	0.959	0.869	.
0.31	1.38	0.848	1.36	0.603	.	.	1.000	0.582	.
1.25	1.39	0.887	1.36	0.623	.	.	.	0.545	.
5	1.21	0.242	1.21	0.119	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE MTIBL (Tibial length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.925	0.016	2.827	0.041	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	51.52	3.13	1.18	6.07	48.63, 54.42
0.078	8	52.60	0.94	0.33	1.78	51.82, 53.38
0.31	7	53.71	1.39	0.52	2.58	52.43, 55.00
1.25	7	52.50	2.68	1.01	5.10	50.02, 54.98
5	8	53.41	1.32	0.47	2.48	52.30, 54.51

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	52.71	45.30	54.64	.	.
0.078	52.67	51.18	53.77	102.09	-2.09
0.31	53.91	51.11	54.99	104.25	-4.25
1.25	53.60	48.31	55.48	101.90	-1.90
5	53.02	52.23	56.42	103.65	-3.65

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.02	0.285

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	52.71	.	.
0.078	52.67	1.000	0.678
0.31	53.91	1.000	0.978
1.25	53.60	1.000	0.938
5	53.02	1.000	0.901

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE MTARL (Tarsal length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.963	0.365	1.183	0.342	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	33.13	1.75	0.66	5.29	31.51, 34.75
0.078	5	34.49	1.49	0.67	4.33	32.63, 36.34
0.31	6	32.43	1.25	0.51	3.84	31.12, 33.74
1.25	6	31.96	1.61	0.66	5.04	30.27, 33.64
5	6	32.16	0.66	0.27	2.04	31.47, 32.85

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.30	30.82	35.95	.	.
0.078	34.31	32.74	36.81	104.10	-4.10
0.31	32.47	30.90	34.26	97.89	2.11
1.25	31.86	29.81	34.56	96.46	3.54
5	32.30	31.05	32.85	97.09	2.91

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	2.80	0.047

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	33.13	.	33.69	.	0.488	0.899	0.580	0.737	.
0.078	34.49	0.997	33.69	0.830	.	0.149	0.049	0.081	.
0.31	32.43	0.443	32.43	0.245	.	.	0.977	0.997	.
1.25	31.96	0.207	32.06	0.122	.	.	.	0.999	.
5	32.16	0.299	32.06	0.124	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE MTIBD (Tibial diameter of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.991	0.986	0.046	0.996	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval	
0 ppm	7	3.13	0.44	0.17	14.14	2.72,	3.54
0.078	8	3.01	0.31	0.11	10.32	2.75,	3.27
0.31	7	2.96	0.28	0.11	9.47	2.70,	3.21
1.25	7	3.10	0.29	0.11	9.26	2.83,	3.36
5	8	2.95	0.29	0.10	9.79	2.71,	3.19

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.10	2.37	3.89	.	.
0.078	3.09	2.47	3.44	96.04	3.96
0.31	2.84	2.66	3.44	94.39	5.61
1.25	3.07	2.73	3.59	98.91	1.09
5	2.96	2.54	3.32	94.13	5.87

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	32	0.47	0.757

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.13	.	3.13	.	0.947	0.849	1.000	0.810	.
0.078	3.01	0.491	3.02	0.306	.	0.998	0.983	0.996	.
0.31	2.96	0.370	3.02	0.335	.	.	0.925	1.000	.
1.25	3.10	0.724	3.02	0.348	.	.	.	0.899	.
5	2.95	0.336	2.95	0.190	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE MTIBW (Tibial weight of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.932	0.026	1.508	0.223	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	1.28	0.33	0.12	25.37	0.98, 1.58
0.078	8	1.06	0.12	0.04	11.48	0.96, 1.16
0.31	7	1.20	0.09	0.03	7.35	1.12, 1.29
1.25	7	1.19	0.22	0.08	18.11	0.99, 1.39
5	8	1.14	0.20	0.07	17.76	0.97, 1.31

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.24	0.97	1.94	.	.
0.078	1.06	0.88	1.23	82.63	17.37
0.31	1.17	1.07	1.34	93.88	6.12
1.25	1.20	0.96	1.58	92.76	7.24
5	1.15	0.87	1.45	88.77	11.23

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	32	1.21	0.325

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.28	.	1.28	.	0.247	0.951	0.914	0.660	.
0.078	1.06	0.067	1.15	0.125	.	0.659	0.739	0.938	.
0.31	1.20	0.500	1.15	0.143	.	.	1.000	0.971	.
1.25	1.19	0.441	1.15	0.148	.	.	.	0.988	.
5	1.14	0.237	1.14	0.122	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE CLOACA (Cloacal area at necropsy (males))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.975	0.535	2.087	0.105	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	482.52	72.38	27.36	15.00	415.57, 549.46
0.078	8	500.01	130.57	46.16	26.11	390.85, 609.17
0.31	7	388.29	49.02	18.53	12.62	342.95, 433.62
1.25	8	481.36	83.51	29.52	17.35	411.55, 551.17
5	8	450.18	90.34	31.94	20.07	374.65, 525.71

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	469.97	395.00	568.71	.	.
0.078	471.62	348.84	715.10	103.63	-3.63
0.31	387.60	299.34	453.33	80.47	19.53
1.25	450.37	392.56	603.26	99.76	0.24
5	425.92	316.74	620.71	93.30	6.70

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	1.72	0.168

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	482.52	.	491.85	.	0.996	0.315	1.000	0.957	.
0.078	500.01	0.893	491.85	0.666	.	0.146	0.994	0.805	.
0.31	388.29	0.089	442.19	0.263	.	.	0.296	0.681	.
1.25	481.36	0.784	442.19	0.262	.	.	.	0.958	.
5	450.18	0.509	442.19	0.268	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FOAM (Age at first foam (days))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.922	0.009	2.888	0.036	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	39.13	4.02	1.42	10.26	35.77, 42.48
0.078	8	37.88	1.64	0.58	4.34	36.50, 39.25
0.31	8	38.25	2.60	0.92	6.81	36.07, 40.43
1.25	8	38.00	1.69	0.60	4.45	36.59, 39.41
5	8	38.25	1.67	0.59	4.36	36.85, 39.65

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	37.50	36.00	47.00	.	.
0.078	37.50	36.00	40.00	96.81	3.19
0.31	37.50	35.00	43.00	97.76	2.24
1.25	37.50	36.00	41.00	97.12	2.88
5	38.00	36.00	41.00	97.76	2.24

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	0.24	0.993

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	37.50	.	.
0.078	37.50	1.000	0.436
0.31	37.50	1.000	0.468
1.25	37.50	1.000	0.520
5	38.00	1.000	0.633

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE PLUMF (Female-type plumage length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.928	0.020	1.608	0.196	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	68.83	17.19	6.08	24.98	54.46, 83.20
0.078	8	61.40	8.16	2.88	13.29	54.57, 68.22
0.31	7	68.93	8.01	3.03	11.62	61.52, 76.33
1.25	7	62.91	10.44	3.95	16.60	53.25, 72.57
5	7	76.64	5.17	1.95	6.74	71.87, 81.42

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	65.49	48.48	103.50	.	.
0.078	61.09	45.33	72.39	89.20	10.80
0.31	69.81	52.58	78.03	100.14	-0.14
1.25	61.67	47.83	82.21	91.40	8.60
5	76.10	68.73	84.70	111.35	-11.35

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	32	2.27	0.084

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	68.83	.	68.83	.	0.647	1.000	0.826	0.634	.
0.078	61.40	0.237	67.26	0.458	.	0.665	0.999	0.072	.
0.31	68.93	0.813	67.26	0.492	.	.	0.834	0.671	.
1.25	62.91	0.359	67.26	0.509	.	.	.	0.147	.
5	76.64	0.993	67.26	0.519	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE PLUMM (Female-type plumage length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.839	<.001	9.172	<.001	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	3.03	8.56	3.03	282.84	0.00, 10.19
0.078	8	0.00	0.00	0.00	.	. , .
0.31	8	0.00	0.00	0.00	.	. , .
1.25	8	6.64	12.49	4.41	188.20	0.00, 17.07
5	8	25.31	17.39	6.15	68.74	10.76, 39.85

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	24.22	.	.
0.078	0.00	0.00	0.00	0.00	100.00
0.31	0.00	0.00	0.00	0.00	100.00
1.25	0.00	0.00	30.72	219.16	-119.16
5	29.91	0.00	44.03	835.84	-735.84

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	18.54	<.001

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.159
0.31	0.00	1.000	0.110
1.25	0.00	1.000	0.788
5	29.91	1.000	1.000

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE ADRBWF (Adrenal to Body Weight ratio in female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.962	0.225	0.406	0.803	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	0.00	0.00	0.00	36.31	0.00, 0.00
0.078	8	0.00	0.00	0.00	29.38	0.00, 0.00
0.31	8	0.00	0.00	0.00	24.44	0.00, 0.00
1.25	7	0.00	0.00	0.00	34.21	0.00, 0.00
5	7	0.00	0.00	0.00	23.63	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	117.21	-17.21
0.31	0.00	0.00	0.00	103.66	-3.66
1.25	0.00	0.00	0.00	84.78	15.22
5	0.00	0.00	0.00	103.38	-3.38

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	1.07	0.385

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.790	0.999	0.869	1.000	.
0.078	0.00	0.985	0.00	0.796	.	0.899	0.263	0.904	.
0.31	0.00	0.873	0.00	0.717	.	.	0.753	1.000	.
1.25	0.00	0.398	0.00	0.465	.	.	.	0.783	.
5	0.00	0.867	0.00	0.475	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE ADRBWM (Adrenal to Body Weight ratio in males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.930	0.020	1.402	0.255	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	46.68	0.00, 0.00
0.078	8	0.00	0.00	0.00	38.12	0.00, 0.00
0.31	7	0.00	0.00	0.00	32.60	0.00, 0.00
1.25	8	0.00	0.00	0.00	43.42	0.00, 0.00
5	8	0.00	0.00	0.00	63.94	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	103.93	-3.93
0.31	0.00	0.00	0.00	78.80	21.20
1.25	0.00	0.00	0.00	96.01	3.99
5	0.00	0.00	0.00	94.37	5.63

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.33	0.853

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	1.000	0.899	1.000	0.999	.
0.078	0.00	0.844	0.00	0.622	.	0.811	0.996	0.993	.
0.31	0.00	0.419	0.00	0.434	.	.	0.944	0.961	.
1.25	0.00	0.730	0.00	0.443	.	.	.	1.000	.
5	0.00	0.703	0.00	0.453	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FFUES (Fecal-urate estrogen content of female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.883	0.001	20.621	<.001	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	141.25	56.07	19.82	39.70	94.38, 188.13
0.078	8	159.27	76.33	26.99	47.92	95.46, 223.08
0.31	7	363.23	55.19	20.86	15.20	312.18, 414.27
1.25	7	1062.07	169.90	64.22	16.00	904.94, 1219.21
5	7	2882.43	470.44	177.81	16.32	2447.34, 3317.52

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	115.57	108.74	273.63	.	.
0.078	128.37	97.06	312.47	112.75	-12.75
0.31	358.96	293.58	453.34	257.15	-157.15
1.25	1099.11	845.29	1311.48	751.89	-651.89
5	2820.22	2324.68	3464.41	2040.60	-1940.60

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	32.23	<.001

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	115.57	.	.
0.078	128.37	1.000	0.663
0.31	358.96	1.000	1.000
1.25	1099.11	1.000	1.000
5	2820.22	1.000	1.000

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE FFUTES (Fecal-urate testosterone content of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.730	<.001	2.432	0.068	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	103.37	21.29	7.53	20.60	85.56, 121.17
0.078	8	105.85	17.60	6.22	16.62	91.14, 120.56
0.31	7	93.39	26.39	9.98	28.26	68.98, 117.80
1.25	7	102.59	45.14	17.06	44.00	60.84, 144.34
5	7	133.98	104.72	39.58	78.16	37.13, 230.83

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.77	70.19	133.50	.	.
0.078	109.59	82.09	129.16	102.40	-2.40
0.31	92.64	65.51	139.20	90.35	9.65
1.25	92.27	49.80	187.83	99.25	0.75
5	101.94	69.93	365.84	129.62	-29.62

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.16	0.884

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.77	.	.
0.078	109.59	1.000	0.458
0.31	92.64	0.929	0.169
1.25	92.27	1.000	0.192
5	101.94	1.000	0.310

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE MFUES (Fecal-urate estrogen content of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.883	<.001	10.764	<.001	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	47.16	11.49	4.34	24.36	36.53, 57.78
0.078	8	81.42	28.50	10.08	35.00	57.59, 105.24
0.31	7	435.08	103.58	39.15	23.81	339.28, 530.87
1.25	8	1169.95	253.85	89.75	21.70	957.73, 1382.18
5	8	2660.42	495.08	175.04	18.61	2246.52, 3074.31

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	47.72	32.87	69.22	.	.
0.078	72.73	55.37	138.87	172.65	-72.65
0.31	416.67	261.17	573.96	922.61	-822.61
1.25	1163.95	804.08	1559.74	2480.97	-2380.97
5	2744.69	1877.84	3411.95	5641.60	-5541.60

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	35.18	<.001

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	47.72	.	.
0.078	72.73	1.000	0.998
0.31	416.67	1.000	1.000
1.25	1163.95	1.000	1.000
5	2744.69	1.000	1.000

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1A
ANALYSIS RESULTS FOR VARIABLE MFUTES (Fecal-urate testosterone content of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.938	0.036	1.202	0.329	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	290.32	83.77	31.66	28.85	212.85, 367.79
0.078	8	314.89	94.98	33.58	30.16	235.49, 394.29
0.31	7	293.33	49.80	18.82	16.98	247.27, 339.39
1.25	8	267.26	58.30	20.61	21.81	218.52, 316.00
5	8	256.06	115.63	40.88	45.16	159.39, 352.73

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	298.47	167.87	427.63	.	.
0.078	270.96	202.68	477.47	108.46	-8.46
0.31	289.88	225.20	363.69	101.04	-1.04
1.25	267.80	192.39	364.87	92.06	7.94
5	221.53	149.45	512.59	88.20	11.80

****

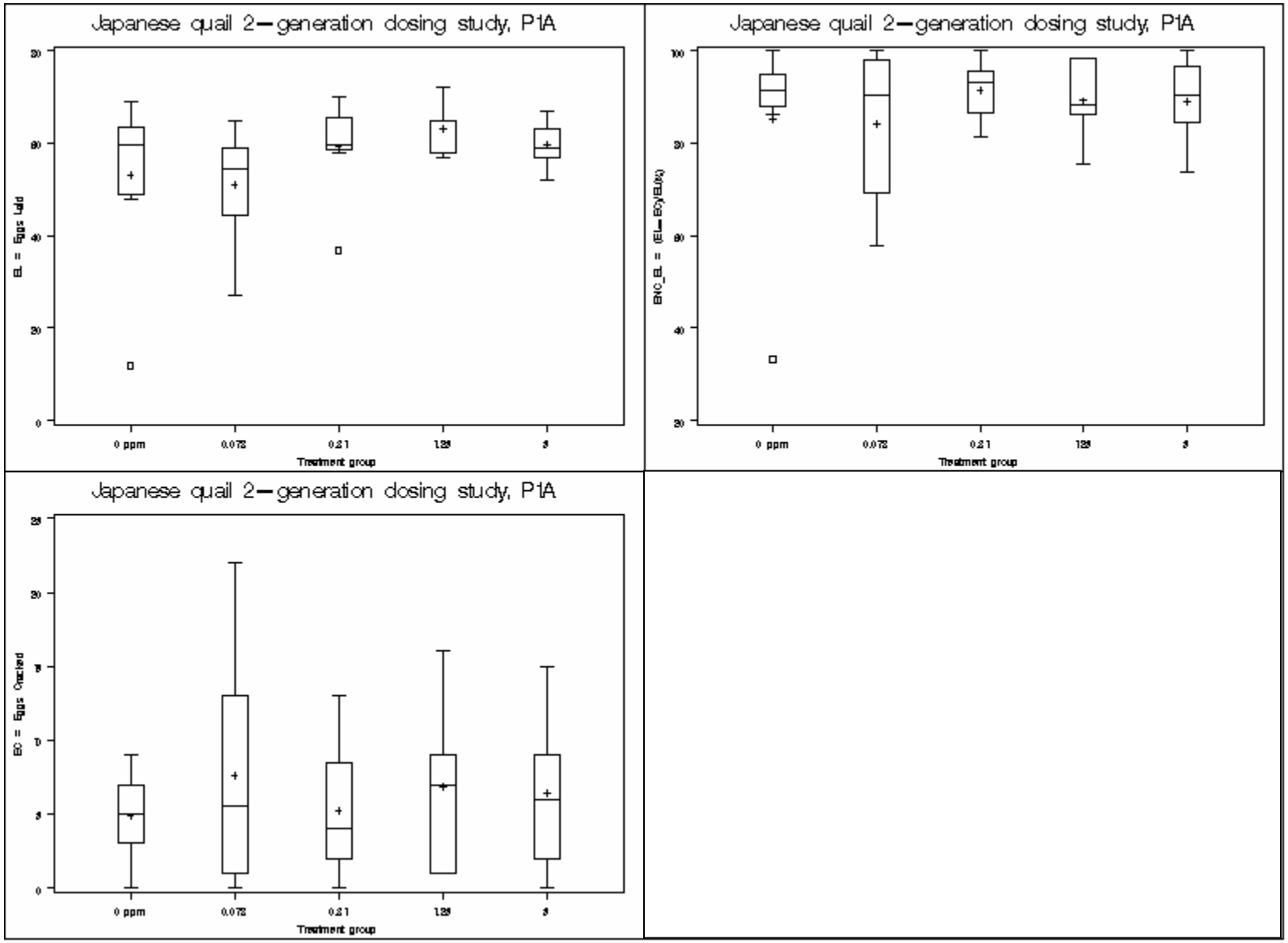
PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

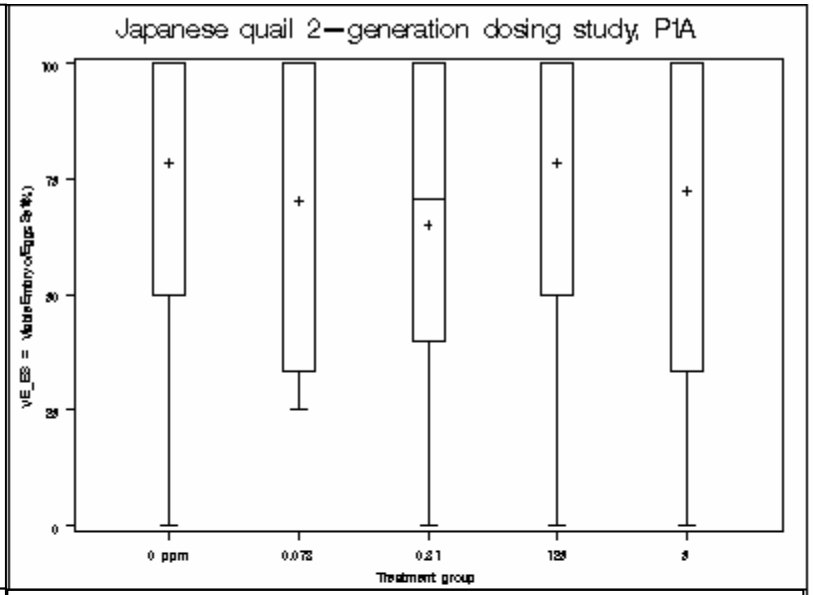
Numerator df	Denominator df	F-stat	P-value
4	33	0.59	0.672

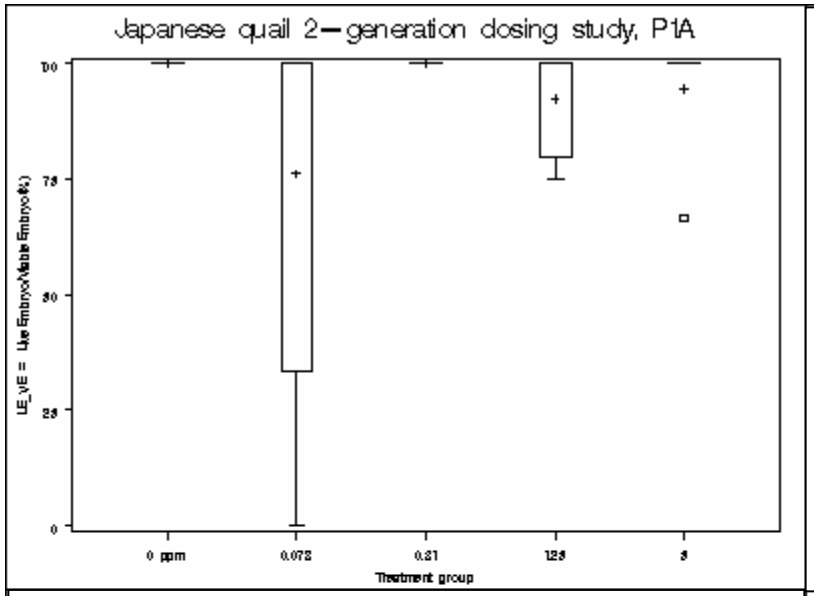
Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

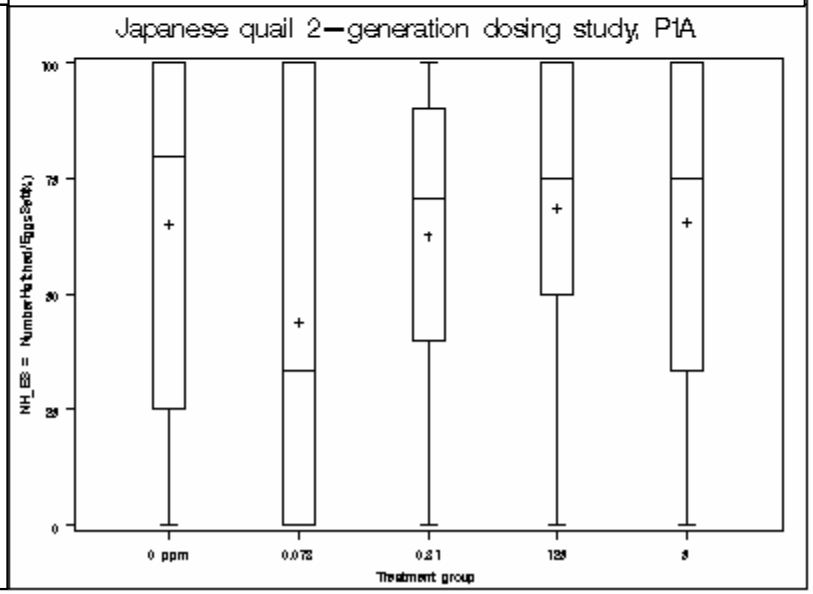
Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	290.32	.	303.42	.	0.980	1.000	0.984	0.935	.
0.078	314.89	0.927	303.42	0.704	.	0.988	0.793	0.640	.
0.31	293.33	0.813	293.33	0.646	.	.	0.975	0.913	.
1.25	267.26	0.583	267.26	0.398	.	.	.	0.999	.
5	256.06	0.468	256.06	0.298	.	.	.	.	.

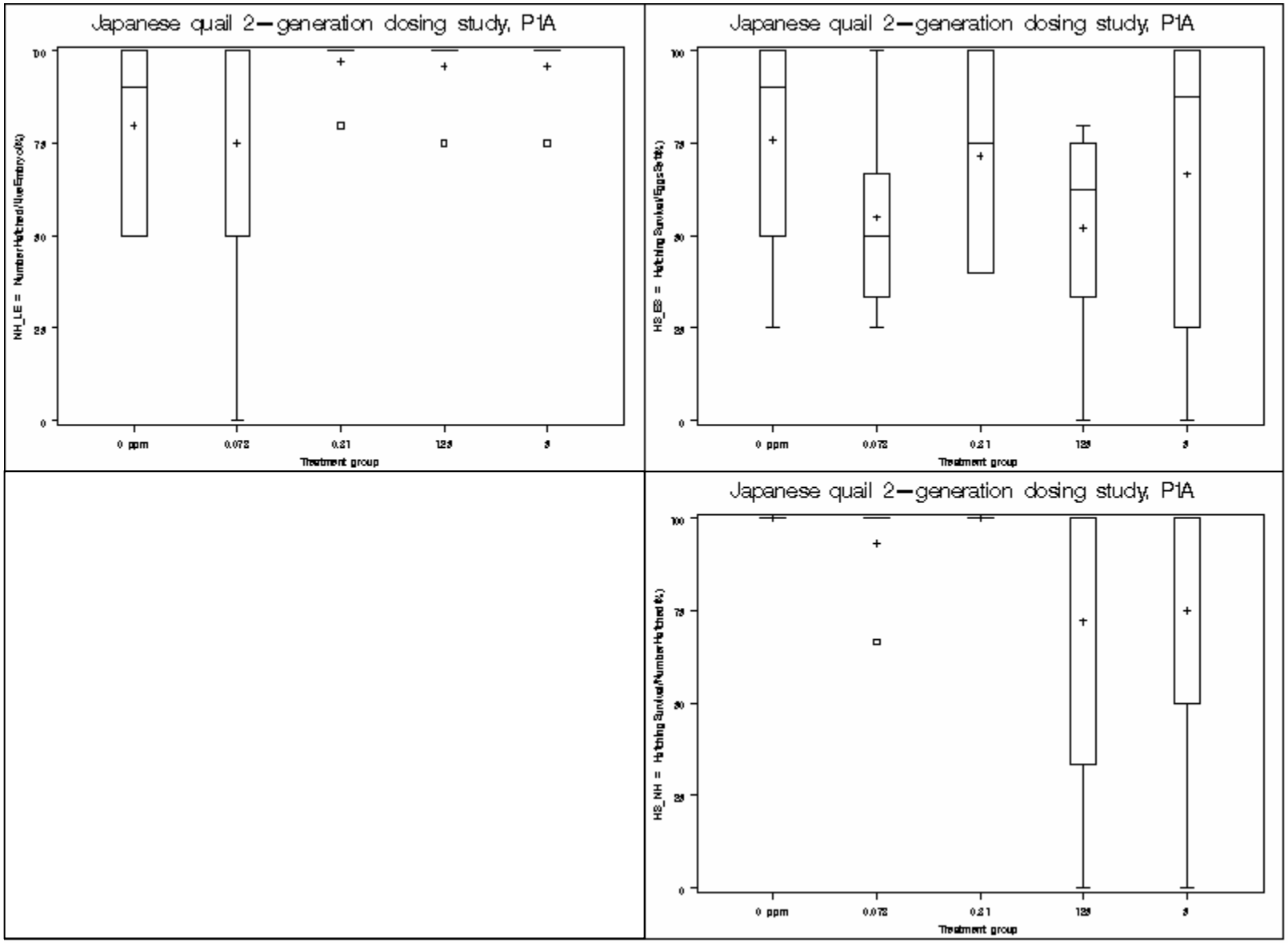
SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

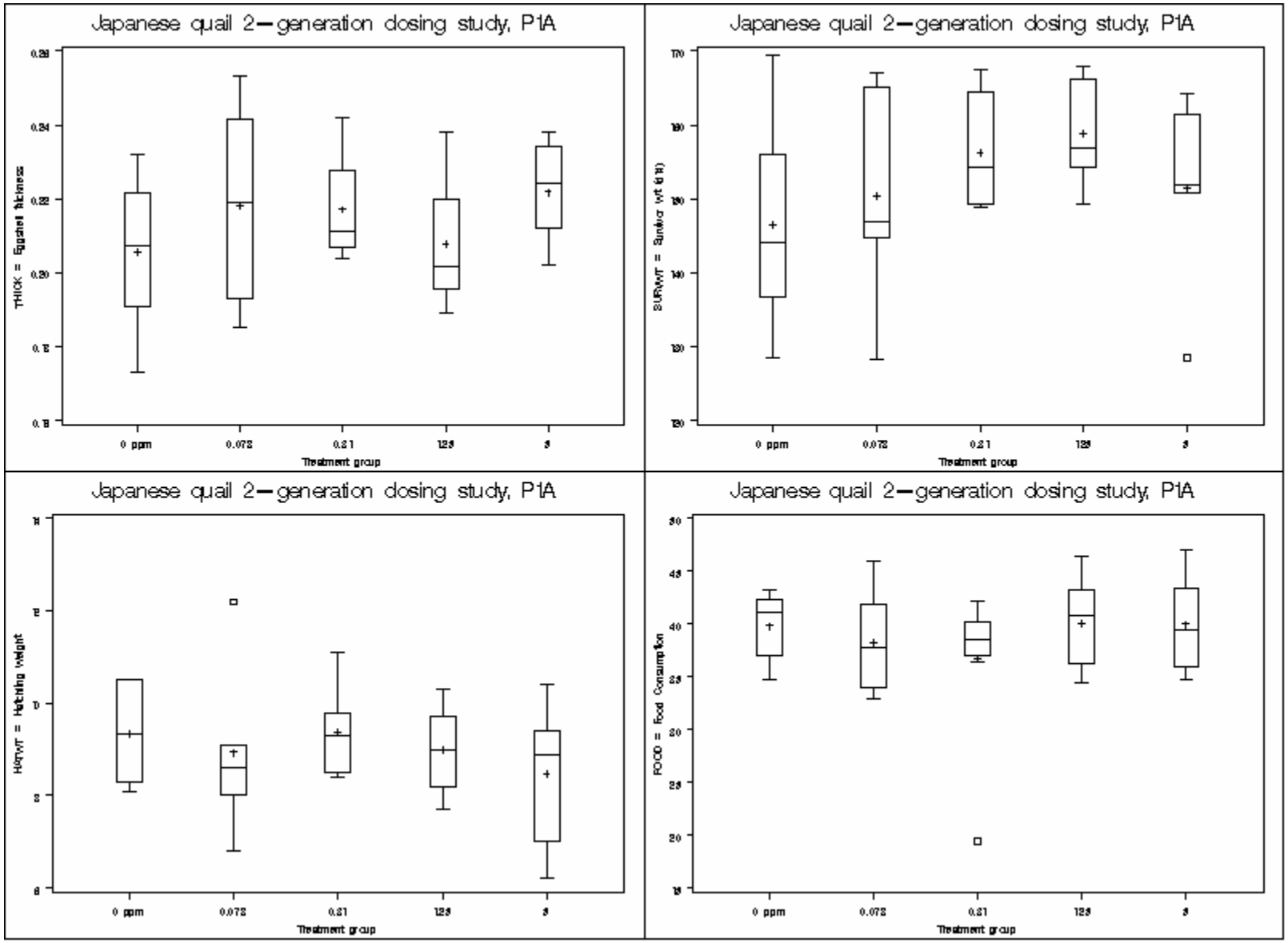

Japanese quail 2−generation dosing study, P1A
EL = Eggs Laid
0 ppm
0.072
0.21
1.28
5
Treatment group
Japanese quail 2−generation dosing study, P1A
ENC_EL = (EL− EC)/EL(%)
0 ppm
0.072
0.21
1.28
5
Treatment group
Japanese quail 2−generation dosing study, P1A
EC = Eggs Cracked
0 ppm
0.072
0.21
1.28
5
Treatment group

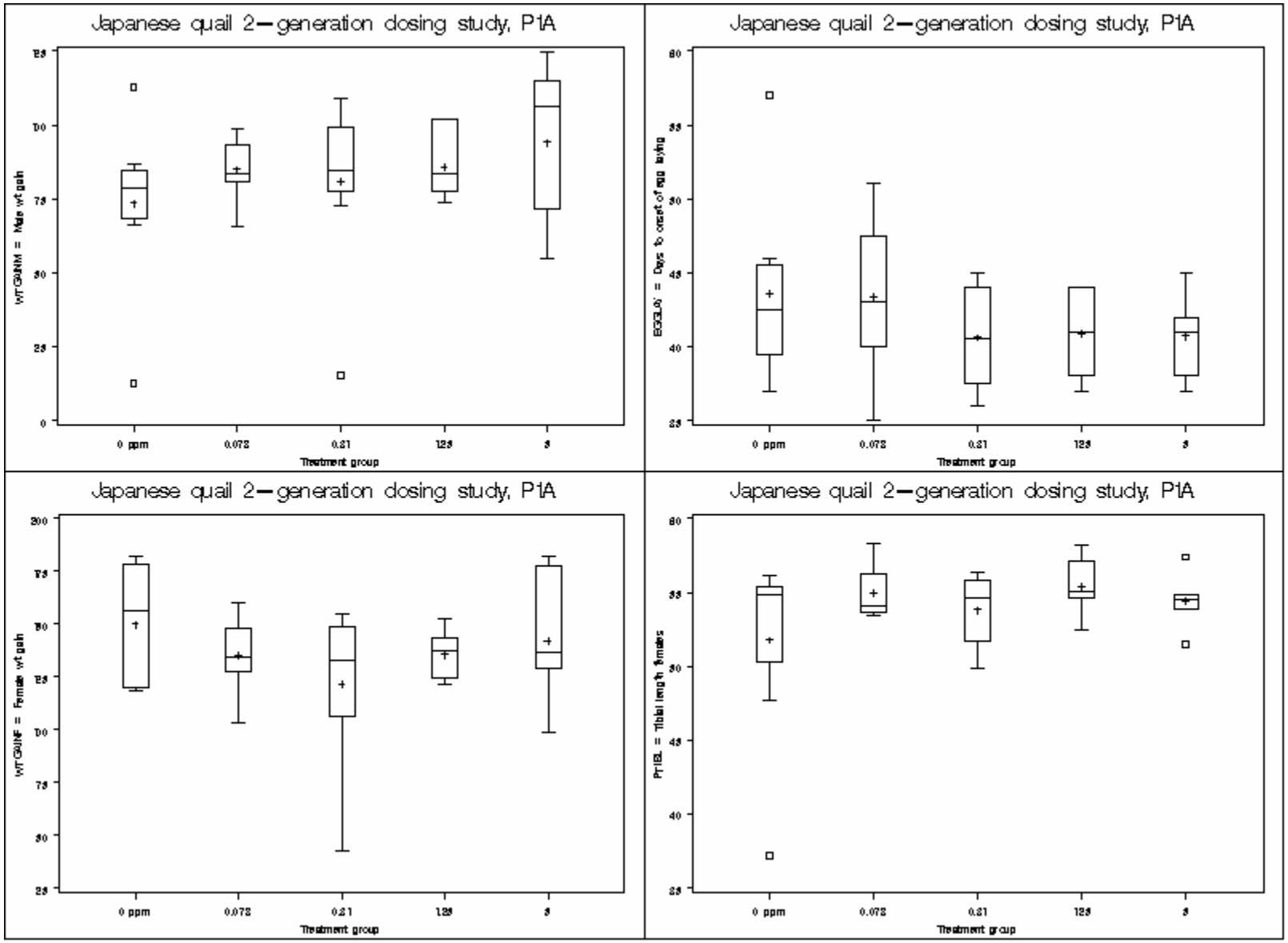

Japanese quail 2−generation dosing study, P1A
100
75
50
0
0 ppm
0.073
0.21
128
Treatment group

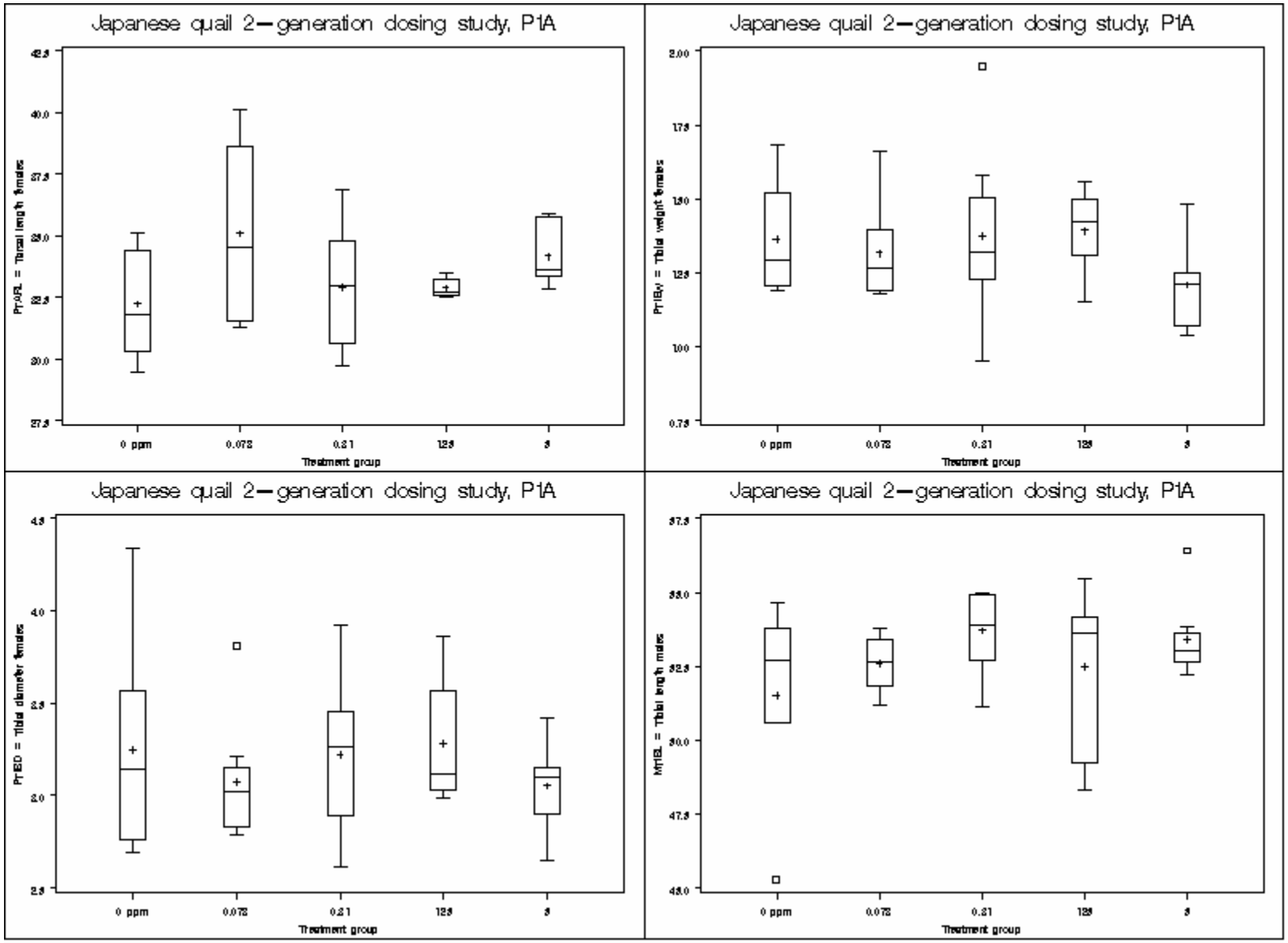

Japanese quail 2−generation dosing study, P1A
LE_VE = Live Embryo/Viable Embryo(%)
100
75
50
25
0
0 ppm
0.073
0.21
125
5
Treatment group

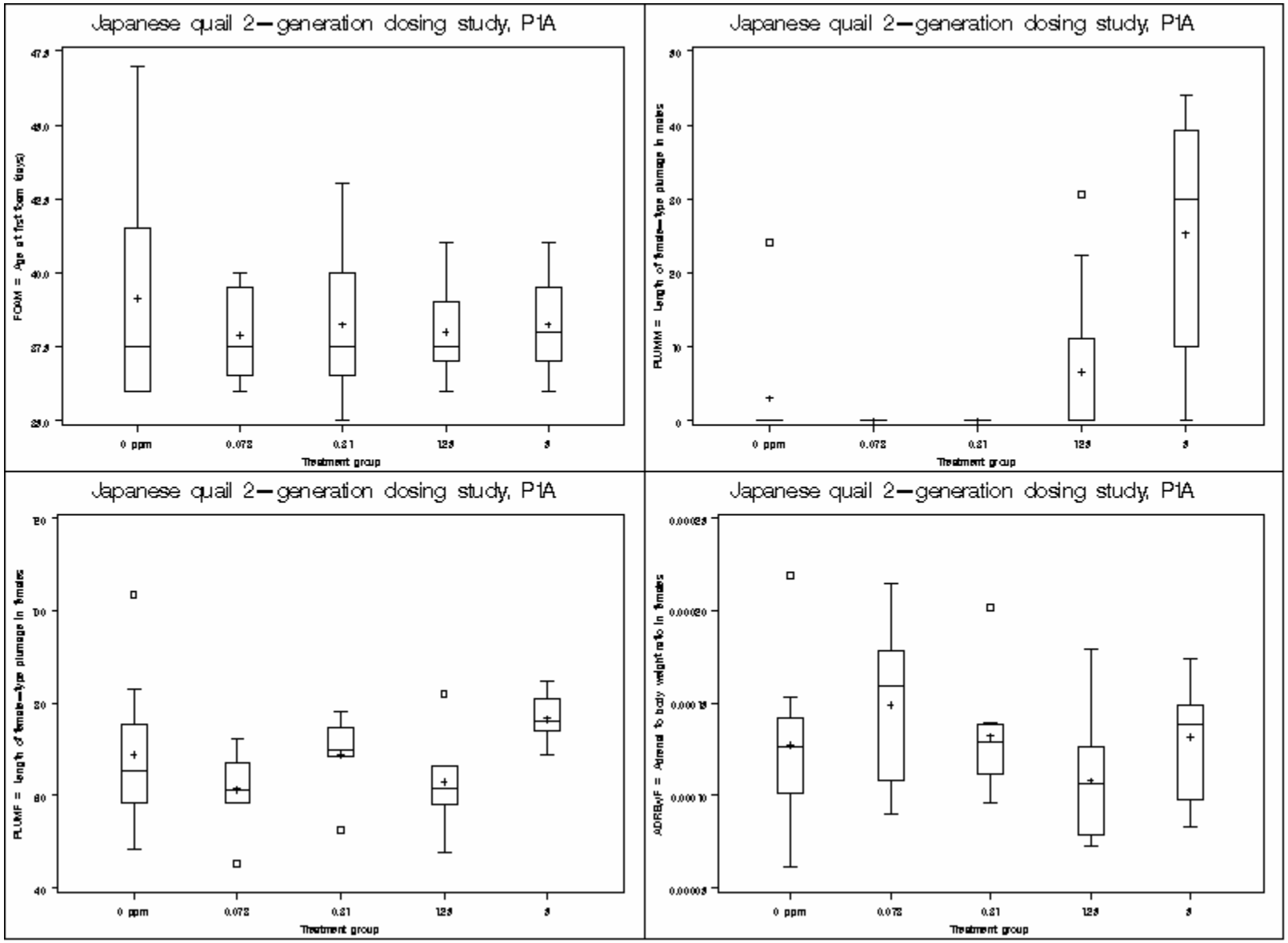

Japanese quail 2−generation dosing study, P1A
NH_ES = Number Hatched/Eggs Set(%)
100
75
50
25
0
0 ppm
0.073
0.21
125
5
Treatment group

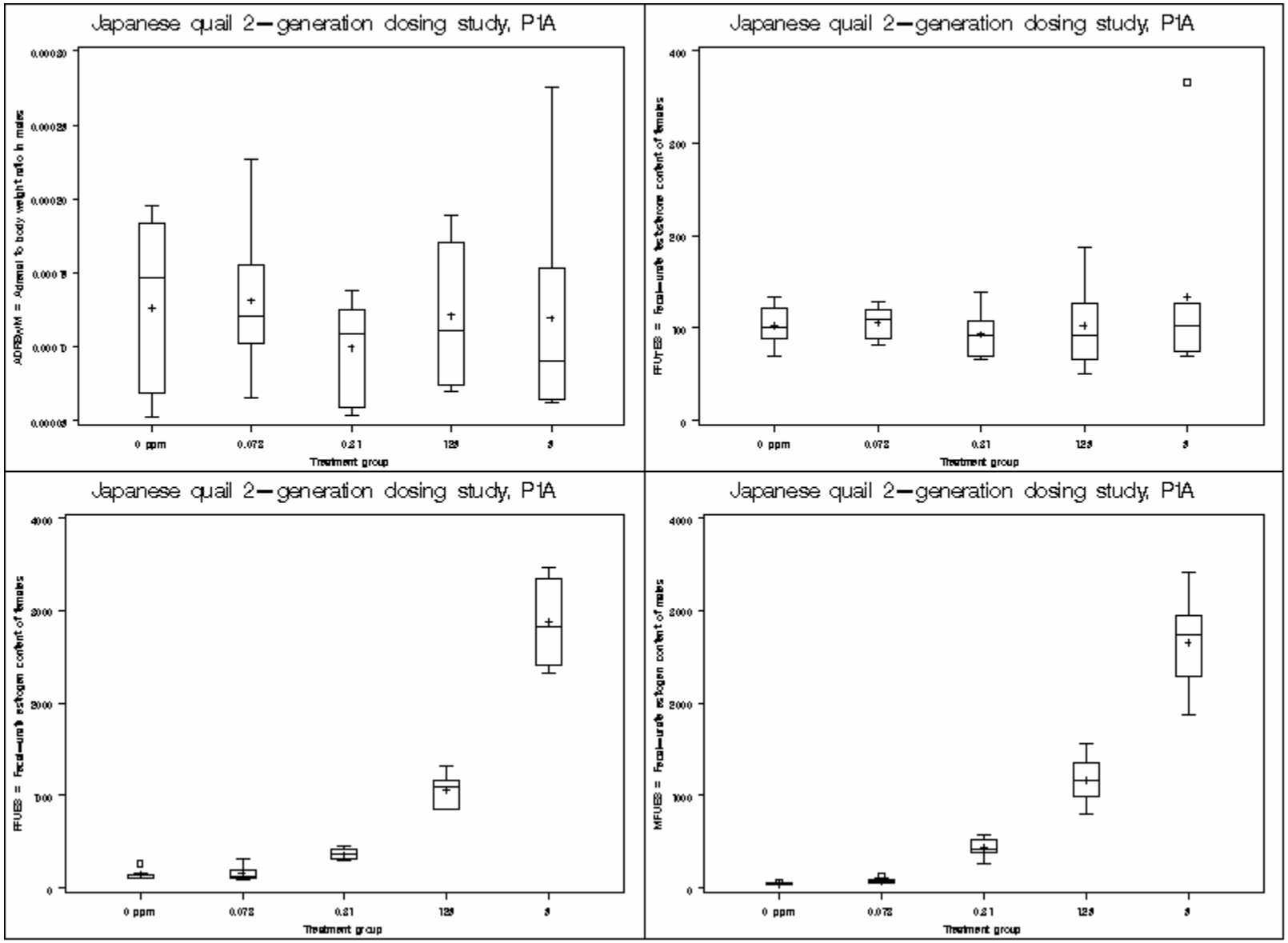

Japanese quail 2−generation dosing study, P1A
NH_LE = Number Hatched/(Live Embryo)(%)
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1A
HS_EB = Hatching Survival/Eggs Set(%)
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1A
HS_NH = Hatching Survival/Number Hatched(%)
0 ppm
0.073
0.21
128
5
Treatment group

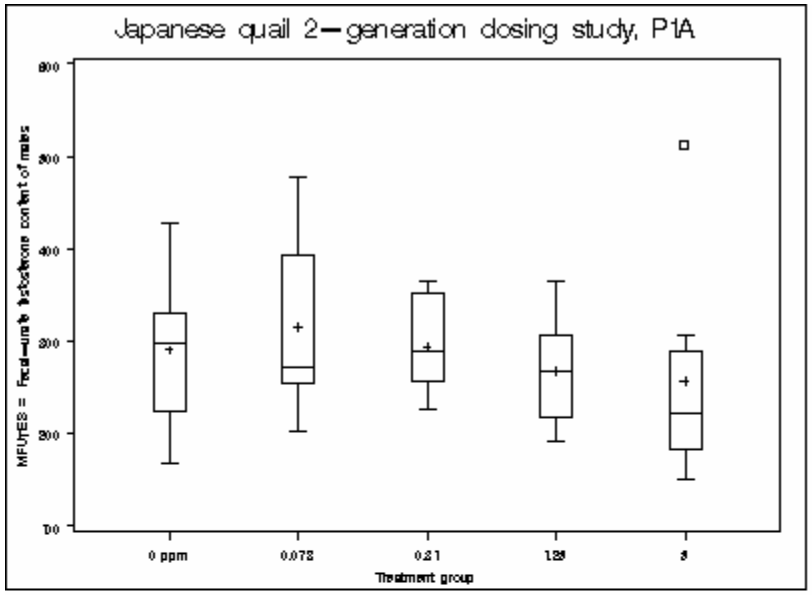

Japanese quail 2−generation dosing study, P1A
THICK = Eggshell thickness
0.18
0.20
0.22
0.24
0.26
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
SURVWT = Survivor wt (g)
120
130
140
150
160
170
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
HATWT = Hatching weight
6
8
10
12
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
FOOD = Food Consumption
15
20
25
30
35
40
45
50
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1A
WTGAINM = Male wt gain
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
EGGL6 = Days to onset of egg laying
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
WTGAINF = Female wt gain
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
PriBL = Tibial length females
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1A
PrTARL = Tarsal length females
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
PrTiBwt = Tibial weight females
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
PrTiED = Tibial diameter females
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
MrTiBL = Tibial length males
0 ppm
0.073
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1A
FOAM = Age at first foam (days)
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
PLUMM = Length of female−type plumage in males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
PLUMF = Length of female−type plumage in females
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1A
ADRBwF = Adrenal to body weight ratio in females
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1A
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1A
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1A
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1A
Treatment group
0 ppm
0.072
0.21
125
5


Japanese quail 2−generation dosing study, P1A
MFUtES = Fecal−urinate testosterone content of males
800
600
400
200
000
0 ppm
0.072
0.21
1.28
5
Treatment group

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE EL (Eggs Laid)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.965	0.207	1.299	0.287	USE PARAMETRIC TESTS

****
*
BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	60.30	5.77	1.83	9.58	56.17, 64.43
0.078	9	59.67	5.50	1.83	9.22	55.44, 63.89
0.31	8	60.75	4.10	1.45	6.74	57.32, 64.18
1.25	8	60.75	2.55	0.90	4.20	58.62, 62.88
5	9	57.78	6.83	2.28	11.83	52.53, 63.03

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	62.00	52.00	69.00	.	.
0.078	61.00	49.00	67.00	98.95	1.05
0.31	61.00	54.00	67.00	100.75	-0.75
1.25	61.00	57.00	64.00	100.75	-0.75
5	59.00	44.00	66.00	95.82	4.18

****
*
PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	39	0.49	0.745

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	60.30	.	60.34	.	0.999	1.000	1.000	0.833	.
0.078	59.67	0.718	60.34	0.591	.	0.993	0.993	0.940	.
0.31	60.75	0.865	60.34	0.625	.	.	1.000	0.772	.
1.25	60.75	0.865	60.34	0.644	.	.	.	0.772	.
5	57.78	0.369	57.78	0.204	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE NEG_EC (Eggs Cracked)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.745	<.001	1.338	0.273	USE NON-PARAMETRIC TESTS

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*
BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	4.80	2.74	0.87	57.10	2.84, 6.76
0.078	9	2.78	1.39	0.46	50.20	1.71, 3.85
0.31	8	4.13	3.14	1.11	76.04	1.50, 6.75
1.25	8	6.50	4.17	1.48	64.23	3.01, 9.99
5	9	6.56	7.88	2.63	120.14	0.50, 12.61

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	4.50	1.00	9.00	.	.
0.078	3.00	1.00	5.00	57.87	42.13
0.31	4.50	0.00	7.00	85.94	14.06
1.25	6.00	3.00	16.00	135.42	-35.42
5	5.00	2.00	27.00	136.57	-36.57

****
*
NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	6.17	0.187

MannWhit(Bon) - testing each trt median signif. greater than control
Jonckheere - test assumes dose-response relationship, testing positive trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	4.50	.	.
0.078	3.00	1.000	0.955
0.31	4.50	1.000	0.791
1.25	6.00	0.762	0.215
5	5.00	1.000	0.248

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE ENC_EL ((EL-EC)/EL (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.730	<.001	1.455	0.235	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval	
0 ppm	10	92.20	4.33	1.37	4.69	89.11,	95.30
0.078	9	95.36	2.38	0.79	2.50	93.52,	97.19
0.31	8	93.15	5.28	1.87	5.67	88.73,	97.56
1.25	8	89.14	7.33	2.59	8.22	83.01,	95.27
5	9	88.57	13.82	4.61	15.60	77.95,	99.19

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	92.81	83.93	98.11	.	.
0.078	95.08	90.91	98.36	103.42	-3.42
0.31	93.05	87.04	100.00	101.03	-1.03
1.25	89.82	72.41	95.31	96.68	3.32
5	90.91	52.63	96.92	96.07	3.93

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.99	0.200

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	92.81	.	.
0.078	95.08	1.000	0.949
0.31	93.05	1.000	0.813
1.25	89.82	0.728	0.235
5	90.91	1.000	0.225

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE VE_ES (ViableEmbryo/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.893	<.001	1.917	0.127	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	45.91	43.41	13.09	94.55	16.75, 75.07
0.078	9	85.56	29.63	9.88	34.63	62.78, 100.00
0.31	8	82.71	15.78	5.58	19.08	69.51, 95.90
1.25	9	80.19	32.79	10.93	40.90	54.98, 100.00
5	7	82.86	37.29	14.09	45.00	48.37, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	50.00	0.00	100.00	.	.
0.078	100.00	20.00	100.00	186.36	-86.36
0.31	80.00	60.00	100.00	180.16	-80.16
1.25	100.00	0.00	100.00	174.66	-74.66
5	100.00	0.00	100.00	180.48	-80.48

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	7.65	0.105

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	50.00	.	.
0.078	100.00	1.000	0.986
0.31	80.00	1.000	0.955
1.25	100.00	1.000	0.951
5	100.00	1.000	0.975

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE LE_VE (LiveEmbryo/ViableEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.521	<.001	2.826	0.040	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	96.43	9.45	3.57	9.80	87.69, 100.00
0.078	9	100.00	0.00	0.00	0.00	. , .
0.31	8	95.00	14.14	5.00	14.89	83.18, 100.00
1.25	8	96.88	8.84	3.13	9.12	89.49, 100.00
5	6	100.00	0.00	0.00	0.00	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	75.00	100.00	.	.
0.078	100.00	100.00	100.00	103.70	-3.70
0.31	100.00	60.00	100.00	98.52	1.48
1.25	100.00	75.00	100.00	100.46	-0.46
5	100.00	100.00	100.00	103.70	-3.70

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.08	0.721

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.872
0.31	100.00	1.000	0.500
1.25	100.00	1.000	0.408
5	100.00	1.000	0.619

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE NH_ES (NumberHatched/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.897	0.002	0.899	0.475	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	66.19	30.53	11.54	46.13	37.95, 94.43
0.078	9	80.56	28.55	9.52	35.45	58.61, 100.00
0.31	8	70.21	14.32	5.06	20.40	58.24, 82.18
1.25	8	80.83	26.25	9.28	32.47	58.89, 100.00
5	7	74.52	35.57	13.45	47.73	41.62, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	75.00	25.00	100.00	.	.
0.078	100.00	20.00	100.00	121.70	-21.70
0.31	63.33	60.00	100.00	106.07	-6.07
1.25	90.00	25.00	100.00	122.12	-22.12
5	80.00	0.00	100.00	112.59	-12.59

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.40	0.493

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	75.00	.	.
0.078	100.00	1.000	0.841
0.31	63.33	1.000	0.425
1.25	90.00	1.000	0.728
5	80.00	1.000	0.751

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE NH_LE (NumberHatched/LiveEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.632	<.001	0.658	0.626	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	95.24	12.60	4.76	13.23	83.59, 100.00
0.078	9	95.00	10.00	3.33	10.53	87.31, 100.00
0.31	8	91.88	15.57	5.50	16.95	78.86, 100.00
1.25	8	91.67	23.57	8.33	25.71	71.96, 100.00
5	6	90.28	15.29	6.24	16.94	74.23, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	66.67	100.00	.	.
0.078	100.00	75.00	100.00	99.75	0.25
0.31	100.00	60.00	100.00	96.47	3.53
1.25	100.00	33.33	100.00	96.25	3.75
5	100.00	66.67	100.00	94.79	5.21

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	0.92	0.921

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.408
0.31	100.00	1.000	0.300
1.25	100.00	1.000	0.470
5	100.00	1.000	0.293

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE HS_ES (HatchlingSurvival/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.942	0.050	0.987	0.428	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	62.62	27.20	10.28	43.43	37.47, 87.77
0.078	9	77.78	30.32	10.11	38.99	54.47, 100.00
0.31	8	57.71	28.85	10.20	50.00	33.59, 81.83
1.25	8	74.58	23.43	8.28	31.42	54.99, 94.17
5	6	73.61	15.22	6.21	20.67	57.64, 89.58

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	75.00	25.00	100.00	.	.
0.078	100.00	20.00	100.00	124.21	-24.21
0.31	60.00	0.00	100.00	92.16	7.84
1.25	75.00	25.00	100.00	119.11	-19.11
5	70.83	60.00	100.00	117.55	-17.55

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.86	0.496

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	62.62	.	71.15	.	0.780	0.996	0.901	0.942	.
0.078	77.78	0.983	71.15	0.820	.	0.522	0.999	0.998	.
0.31	57.71	0.655	68.18	0.779	.	.	0.700	0.792	.
1.25	74.58	0.966	68.18	0.797	.	.	.	1.000	.
5	73.61	0.954	68.18	0.798	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE HS_NH (HatchlingSurvival/NumberHatched (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.749	<.001	3.337	0.021	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	96.43	9.45	3.57	9.80	87.69, 100.00
0.078	9	96.30	11.11	3.70	11.54	87.76, 100.00
0.31	8	80.21	35.06	12.39	43.71	50.90, 100.00
1.25	8	93.75	11.57	4.09	12.34	84.07, 100.00
5	6	86.67	20.66	8.43	23.83	64.99, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	75.00	100.00	.	.
0.078	100.00	66.67	100.00	99.86	0.14
0.31	100.00	0.00	100.00	83.18	16.82
1.25	100.00	75.00	100.00	97.22	2.78
5	100.00	60.00	100.00	89.88	10.12

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.79	0.594

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.537
0.31	100.00	1.000	0.108
1.25	100.00	1.000	0.207
5	100.00	1.000	0.123

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE THICK (Eggshell thickness)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.980	0.560	0.935	0.453	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	0.21	0.02	0.00	7.14	0.20, 0.22
0.078	9	0.21	0.02	0.01	9.72	0.20, 0.23
0.31	9	0.21	0.02	0.01	7.63	0.20, 0.22
1.25	10	0.22	0.02	0.00	7.19	0.21, 0.23
5	9	0.22	0.01	0.00	6.39	0.21, 0.23

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.21	0.19	0.23	.	.
0.078	0.22	0.18	0.23	100.94	-0.94
0.31	0.20	0.18	0.24	98.77	1.23
1.25	0.22	0.18	0.24	102.82	-2.82
5	0.21	0.20	0.24	102.84	-2.84

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	43	0.50	0.737

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	ose4Dose5	
0 ppm	0.21	.	0.21	.	0.999	0.997	0.918	0.924	.
0.078	0.21	0.887	0.21	0.708	.	0.975	0.984	0.985	.
0.31	0.21	0.681	0.21	0.742	.	.	0.784	0.797	.
1.25	0.22	0.970	0.21	0.764	.	.	.	1.000	.
5	0.22	0.969	0.21	0.772	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE HATWT (Hatchling Weight)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.958	0.167	0.375	0.825	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	9.15	1.00	0.38	10.91	8.23, 10.07
0.078	9	9.23	0.93	0.31	10.05	8.52, 9.95
0.31	8	8.53	1.08	0.38	12.64	7.63, 9.43
1.25	8	9.28	1.28	0.45	13.80	8.21, 10.35
5	6	9.93	1.55	0.63	15.58	8.30, 11.55

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	9.26	7.30	10.30	.	.
0.078	8.87	8.00	10.38	100.89	-0.89
0.31	8.55	6.43	10.07	93.17	6.83
1.25	8.90	7.40	11.03	101.40	-1.40
5	10.31	6.96	11.43	108.47	-8.47

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	1.28	0.299

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	9.15	.	9.20	.	1.000	0.835	1.000	0.751	.
0.078	9.23	0.836	9.20	0.617	.	0.720	1.000	0.788	.
0.31	8.53	0.355	9.18	0.640	.	.	0.694	0.193	.
1.25	9.28	0.856	9.18	0.659	.	.	.	0.839	.
5	9.93	0.986	9.18	0.669	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE EGGLAY (Days to onset of egg laying)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.860	<.001	0.968	0.435	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	41.27	4.96	1.50	12.02	37.94, 44.61
0.078	9	40.33	2.74	0.91	6.79	38.23, 42.44
0.31	9	42.33	6.04	2.01	14.27	37.69, 46.98
1.25	9	41.00	2.74	0.91	6.68	38.89, 43.11
5	9	42.22	4.18	1.39	9.89	39.01, 45.43

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	39.00	36.00	52.00	.	.
0.078	41.00	37.00	45.00	97.72	2.28
0.31	40.00	39.00	58.00	102.57	-2.57
1.25	40.00	38.00	47.00	99.34	0.66
5	42.00	37.00	51.00	102.30	-2.30

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.32	0.858

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	39.00	.	.
0.078	41.00	1.000	0.439
0.31	40.00	1.000	0.714
1.25	40.00	1.000	0.736
5	42.00	1.000	0.853

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FTIBL (Tibial length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.944	0.057	1.550	0.211	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	55.04	1.06	0.40	1.93	54.05, 56.02
0.078	8	53.26	2.91	1.03	5.46	50.83, 55.69
0.31	7	53.62	4.49	1.70	8.37	49.47, 57.78
1.25	8	54.59	2.53	0.89	4.63	52.48, 56.70
5	8	56.22	2.35	0.83	4.18	54.26, 58.18

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	55.00	53.50	56.50	.	.
0.078	53.49	50.00	57.05	96.77	3.23
0.31	55.00	44.50	57.68	97.43	2.57
1.25	54.75	50.82	59.52	99.19	0.81
5	55.67	53.50	60.01	102.14	-2.14

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	1.32	0.282

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	55.04	.	55.04	.	0.750	0.886	0.998	0.930	.
0.078	53.26	0.290	54.45	0.412	.	0.999	0.882	0.257	.
0.31	53.62	0.404	54.45	0.446	.	.	0.965	0.418	.
1.25	54.59	0.680	54.45	0.455	.	.	.	0.786	.
5	56.22	0.958	54.45	0.465	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FTARL (Tarsal length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.983	0.874	0.857	0.502	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	35.96	2.55	0.96	7.10	33.60, 38.32
0.078	7	35.01	2.04	0.77	5.83	33.12, 36.90
0.31	6	34.58	4.02	1.64	11.63	30.36, 38.80
1.25	7	36.24	3.31	1.25	9.13	33.18, 39.30
5	5	33.86	2.84	1.27	8.39	30.33, 37.39

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	35.09	32.64	39.50	.	.
0.078	34.50	32.50	39.00	97.36	2.64
0.31	34.41	29.49	41.00	96.16	3.84
1.25	36.42	31.48	40.50	100.77	-0.77
5	34.32	30.72	38.02	94.16	5.84

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	27	0.64	0.637

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	35.96	.	35.96	.	0.975	0.920	1.000	0.753	.
0.078	35.01	0.572	35.31	0.409	.	0.999	0.939	0.964	.
0.31	34.58	0.464	35.31	0.444	.	.	0.856	0.994	.
1.25	36.24	0.860	35.31	0.452	.	.	.	0.661	.
5	33.86	0.306	33.86	0.162	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FTIBD (Tibial diameter of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.959	0.179	1.331	0.279	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	3.04	0.19	0.07	6.38	2.86, 3.22
0.078	8	3.01	0.20	0.07	6.73	2.84, 3.18
0.31	7	3.23	0.38	0.15	11.91	2.87, 3.58
1.25	8	3.13	0.37	0.13	11.99	2.81, 3.44
5	8	3.10	0.18	0.07	5.96	2.95, 3.26

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.08	2.69	3.32	.	.
0.078	3.07	2.61	3.20	98.94	1.06
0.31	3.17	2.61	3.83	106.16	-6.16
1.25	3.05	2.73	3.91	102.93	-2.93
5	3.13	2.74	3.34	102.15	-2.15

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.67	0.616

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.04	.	3.10	.	0.999	0.727	0.973	0.991	.
0.078	3.01	0.711	3.10	0.746	.	0.567	0.909	0.957	.
0.31	3.23	0.987	3.10	0.775	.	.	0.961	0.917	.
1.25	3.13	0.935	3.10	0.797	.	.	.	1.000	.
5	3.10	0.908	3.10	0.808	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FTIBW (Tibial weight of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.934	0.026	0.553	0.698	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	1.36	0.21	0.08	15.67	1.17, 1.56
0.078	8	1.40	0.20	0.07	14.46	1.23, 1.57
0.31	7	1.30	0.26	0.10	19.90	1.06, 1.53
1.25	8	1.34	0.20	0.07	15.26	1.17, 1.51
5	8	1.33	0.13	0.05	9.63	1.23, 1.44

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.32	1.08	1.71	.	.
0.078	1.34	1.12	1.74	102.82	-2.82
0.31	1.27	0.97	1.82	95.07	4.93
1.25	1.29	1.15	1.72	98.41	1.59
5	1.31	1.17	1.61	97.86	2.14

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.27	0.893

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.36	.	1.38	.	0.996	0.971	1.000	0.999	.
0.078	1.40	0.891	1.38	0.664	.	0.853	0.976	0.963	.
0.31	1.30	0.542	1.32	0.461	.	.	0.992	0.996	.
1.25	1.34	0.718	1.32	0.472	.	.	.	1.000	.
5	1.33	0.690	1.32	0.482	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE MTIBL (Tibial length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.972	0.441	2.716	0.046	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	53.37	2.28	0.93	4.28	50.97, 55.76
0.078	8	53.46	1.80	0.64	3.37	51.95, 54.96
0.31	8	54.97	2.33	0.82	4.24	53.02, 56.91
1.25	8	54.15	1.21	0.43	2.23	53.14, 55.16
5	8	54.09	1.15	0.41	2.13	53.13, 55.06

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	53.50	51.00	56.00	.	.
0.078	52.72	51.50	56.43	100.17	-0.17
0.31	55.75	50.64	57.43	102.99	-2.99
1.25	54.09	52.76	56.23	101.47	-1.47
5	53.75	53.00	56.50	101.36	-1.36

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.78	0.437

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	53.50	.	.
0.078	52.72	1.000	0.651
0.31	55.75	1.000	0.952
1.25	54.09	1.000	0.893
5	53.75	1.000	0.820

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE MTARL (Tarsal length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.970	0.511	0.433	0.783	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	4	36.75	4.27	2.14	11.62	29.95, 43.55
0.078	6	34.47	2.57	1.05	7.47	31.76, 37.17
0.31	7	35.38	2.86	1.08	8.09	32.73, 38.03
1.25	7	34.15	3.04	1.15	8.91	31.34, 36.96
5	8	34.97	2.89	1.02	8.25	32.56, 37.38

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	38.00	31.00	40.00	.	.
0.078	35.29	30.68	37.00	93.79	6.21
0.31	35.00	30.51	38.50	96.28	3.72
1.25	33.72	31.04	40.00	92.92	7.08
5	33.66	32.30	39.50	95.15	4.85

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	27	0.54	0.708

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	36.75	.	36.75	.	0.773	0.951	0.656	0.873	.
0.078	34.47	0.281	34.96	0.222	.	0.982	1.000	0.998	.
0.31	35.38	0.460	34.96	0.228	.	.	0.941	0.999	.
1.25	34.15	0.214	34.59	0.176	.	.	.	0.985	.
5	34.97	0.360	34.59	0.172	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE MTIBD (Tibial diameter of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.969	0.366	2.561	0.057	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	3.09	0.16	0.07	5.30	2.92, 3.27
0.078	8	2.90	0.26	0.09	9.04	2.68, 3.12
0.31	8	2.98	0.18	0.07	6.20	2.82, 3.13
1.25	8	3.04	0.45	0.16	14.72	2.67, 3.42
5	8	2.89	0.28	0.10	9.64	2.66, 3.12

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.11	2.91	3.26	.	.
0.078	3.00	2.37	3.18	93.75	6.25
0.31	2.98	2.71	3.31	96.17	3.83
1.25	2.89	2.63	3.90	98.36	1.64
5	2.87	2.57	3.30	93.47	6.53

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.65	0.629

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.09	.	3.09	.	0.735	0.942	0.998	0.702	.
0.078	2.90	0.270	2.97	0.268	.	0.985	0.863	1.000	.
0.31	2.98	0.465	2.97	0.286	.	.	0.990	0.978	.
1.25	3.04	0.653	2.97	0.297	.	.	.	0.836	.
5	2.89	0.251	2.89	0.138	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE MTIBW (Tibial weight of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.960	0.183	1.641	0.187	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	1.18	0.19	0.08	16.55	0.97, 1.38
0.078	8	1.19	0.18	0.06	15.03	1.04, 1.34
0.31	8	1.16	0.14	0.05	11.71	1.04, 1.27
1.25	8	1.18	0.09	0.03	7.75	1.11, 1.26
5	8	1.21	0.12	0.04	10.13	1.11, 1.31

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.16	0.96	1.46	.	.
0.078	1.12	0.98	1.49	100.67	-0.67
0.31	1.12	1.03	1.42	98.13	1.87
1.25	1.20	1.05	1.33	100.46	-0.46
5	1.21	1.04	1.40	102.58	-2.58

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.13	0.970

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.18	.	1.18	.	1.000	0.999	1.000	0.995	.
0.078	1.19	0.809	1.18	0.608	.	0.994	1.000	0.998	.
0.31	1.16	0.671	1.18	0.643	.	.	0.996	0.951	.
1.25	1.18	0.799	1.18	0.661	.	.	.	0.997	.
5	1.21	0.884	1.18	0.673	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE CLOACA (Cloacal area at necropsy (males))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.985	0.875	1.797	0.152	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	430.84	45.32	18.50	10.52	383.28, 478.40
0.078	8	489.86	77.82	27.52	15.89	424.80, 554.93
0.31	8	451.02	120.15	42.48	26.64	350.57, 551.47
1.25	9	408.06	80.86	26.95	19.82	345.91, 470.22
5	8	444.17	42.28	14.95	9.52	408.82, 479.52

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	435.82	381.88	504.04	.	.
0.078	480.66	408.96	636.12	113.70	-13.70
0.31	458.08	260.67	653.43	104.68	-4.68
1.25	408.10	290.12	538.59	94.71	5.29
5	448.66	386.56	499.75	103.10	-3.10

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	34	1.16	0.345

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	430.84	.	464.57	.	0.655	0.990	0.983	0.998	.
0.078	489.86	0.988	464.57	0.856	.	0.867	0.244	0.784	.
0.31	451.02	0.899	451.02	0.797	.	.	0.804	1.000	.
1.25	408.06	0.557	425.06	0.575	.	.	.	0.884	.
5	444.17	0.864	425.06	0.588	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FOAM (Age at first foam (days))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.971	0.293	1.764	0.154	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	38.80	1.62	0.51	4.17	37.64, 39.96
0.078	9	39.33	1.32	0.44	3.36	38.32, 40.35
0.31	9	40.67	2.69	0.90	6.62	38.60, 42.74
1.25	10	39.10	1.60	0.50	4.08	37.96, 40.24
5	9	39.44	2.07	0.69	5.24	37.85, 41.03

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	39.00	36.00	41.00	.	.
0.078	40.00	37.00	40.00	101.37	-1.37
0.31	40.00	37.00	45.00	104.81	-4.81
1.25	39.00	36.00	41.00	100.77	-0.77
5	40.00	36.00	43.00	101.66	-1.66

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	42	1.30	0.286

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	38.80	.	39.57	.	0.973	0.227	0.997	0.947	.
0.078	39.33	0.943	39.57	0.880	.	0.579	0.999	1.000	.
0.31	40.67	0.999	39.57	0.904	.	.	0.394	0.656	.
1.25	39.10	0.899	39.26	0.838	.	.	.	0.995	.
5	39.44	0.958	39.26	0.844	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE PLUMF (Female-type plumage length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.984	0.864	1.329	0.280	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	60.10	9.60	3.63	15.98	51.22, 68.98
0.078	8	65.19	6.50	2.30	9.97	59.76, 70.62
0.31	7	68.33	11.00	4.16	16.10	58.15, 78.50
1.25	8	62.88	13.79	4.88	21.93	51.35, 74.41
5	8	61.01	8.15	2.88	13.36	54.20, 67.83

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	62.30	39.17	68.76	.	.
0.078	66.06	52.75	71.63	108.47	-8.47
0.31	64.47	57.50	87.22	113.69	-13.69
1.25	61.99	44.42	82.12	104.63	-4.63
5	58.63	52.49	76.99	101.52	-1.52

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.78	0.545

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	60.10	.	64.57	.	0.865	0.556	0.983	1.000	.
0.078	65.19	0.973	64.57	0.873	.	0.974	0.991	0.920	.
0.31	68.33	0.994	64.57	0.893	.	.	0.834	0.633	.
1.25	62.88	0.923	62.88	0.834	.	.	.	0.996	.
5	61.01	0.845	61.01	0.722	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE PLUMM (Female-type plumage length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.785	<.001	6.362	<.001	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	0.00	0.00	0.00	.	. , .
0.078	10	5.49	11.69	3.70	212.89	0.00, 13.86
0.31	10	4.28	13.54	4.28	316.23	0.00, 13.97
1.25	10	9.66	12.82	4.05	132.67	0.49, 18.84
5	9	10.40	15.62	5.21	150.23	0.00, 22.40

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	30.92	.	.
0.31	0.00	0.00	42.81	.	.
1.25	0.00	0.00	31.71	.	.
5	0.00	0.00	33.15	.	.

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.61	0.230

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.927
0.31	0.00	1.000	0.789
1.25	0.00	1.000	0.971
5	0.00	1.000	0.982

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE ADRBWF (Adrenal to Body Weight ratio in female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.964	0.262	0.851	0.503	USE PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	56.36	0.00, 0.00
0.078	8	0.00	0.00	0.00	57.48	0.00, 0.00
0.31	7	0.00	0.00	0.00	47.19	0.00, 0.00
1.25	8	0.00	0.00	0.00	56.95	0.00, 0.00
5	8	0.00	0.00	0.00	37.28	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	128.34	-28.34
0.31	0.00	0.00	0.00	103.13	-3.13
1.25	0.00	0.00	0.00	94.22	5.78
5	0.00	0.00	0.00	116.00	-16.00

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PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	33	0.47	0.759

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.866	1.000	1.000	0.981	.
0.078	0.00	0.973	0.00	0.782	.	0.907	0.745	0.992	.
0.31	0.00	0.825	0.00	0.681	.	.	0.998	0.992	.
1.25	0.00	0.721	0.00	0.702	.	.	.	0.936	.
5	0.00	0.926	0.00	0.714	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE ADRBWM (Adrenal to Body Weight ratio in males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.981	0.738	1.746	0.162	USE PARAMETRIC TESTS

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*
BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	30.61	0.00, 0.00
0.078	8	0.00	0.00	0.00	43.10	0.00, 0.00
0.31	8	0.00	0.00	0.00	23.97	0.00, 0.00
1.25	9	0.00	0.00	0.00	27.05	0.00, 0.00
5	8	0.00	0.00	0.00	23.86	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	92.65	7.35
0.31	0.00	0.00	0.00	85.88	14.12
1.25	0.00	0.00	0.00	82.02	17.98
5	0.00	0.00	0.00	67.98	32.02

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*
PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	35	1.52	0.217

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.984	0.849	0.680	0.172	.
0.078	0.00	0.577	0.00	0.359	.	0.987	0.926	0.375	.
0.31	0.00	0.362	0.00	0.204	.	.	0.998	0.678	.
1.25	0.00	0.244	0.00	0.127	.	.	.	0.821	.
5	0.00	0.044	0.00	0.017	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	1.25	5
Williams	1.25	5

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FFUES (Fecal-urate estrogen content of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.867	<.001	10.454	<.001	USE NON-PARAMETRIC TESTS

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*
BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	119.56	19.22	6.80	16.08	103.49, 135.63
0.078	8	172.73	41.01	14.50	23.74	138.44, 207.01
0.31	7	375.64	67.35	25.46	17.93	313.35, 437.92
1.25	8	943.74	126.35	44.67	13.39	838.11, 1049.36
5	8	2924.05	334.25	118.18	11.43	2644.61, 3203.49

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	121.51	89.02	153.89	.	.
0.078	179.79	98.30	212.75	144.47	-44.47
0.31	358.73	284.48	463.31	314.19	-214.19
1.25	946.27	782.55	1119.13	789.36	-689.36
5	2991.83	2414.11	3452.11	2445.76	-2345.76

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	35.54	<.001

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	121.51	.	.
0.078	179.79	1.000	0.992
0.31	358.73	1.000	1.000
1.25	946.27	1.000	1.000
5	2991.83	1.000	1.000

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE FFUTES (Fecal-urate testosterone content of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.987	0.913	3.713	0.013	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	8	96.21	39.81	14.08	41.38	62.93, 129.49
0.078	8	96.41	24.42	8.63	25.33	76.00, 116.83
0.31	7	107.28	21.90	8.28	20.42	87.02, 127.53
1.25	8	96.84	24.04	8.50	24.82	76.74, 116.94
5	8	81.21	13.82	4.89	17.02	69.66, 92.76

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	93.07	44.11	150.54	.	.
0.078	94.71	56.23	128.55	100.21	-0.21
0.31	100.59	83.50	144.18	111.50	-11.50
1.25	96.14	64.34	127.58	100.66	-0.66
5	80.27	62.28	105.52	84.41	15.59

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	4.58	0.334

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	93.07	.	.
0.078	94.71	1.000	0.542
0.31	100.59	1.000	0.801
1.25	96.14	1.000	0.651
5	80.27	1.000	0.155

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE MFUES (Fecal-urate estrogen content of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.926	0.012	5.174	0.002	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	54.13	10.94	4.14	20.22	44.01, 64.25
0.078	8	154.48	94.38	33.37	61.10	75.57, 233.39
0.31	8	344.19	128.27	45.35	37.27	236.96, 451.43
1.25	9	1163.60	172.00	57.33	14.78	1031.39, 1295.82
5	8	2479.87	291.58	103.09	11.76	2236.10, 2723.63

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	53.83	37.47	69.42	.	.
0.078	123.27	70.03	336.05	285.40	-185.40
0.31	340.64	128.57	512.31	635.90	-535.90
1.25	1090.82	1033.33	1558.96	2149.76	-2049.76
5	2429.94	2027.18	2953.02	4581.56	-4481.56

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NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	36.70	<.001

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	53.83	.	.
0.078	123.27	1.000	0.999
0.31	340.64	1.000	1.000
1.25	1090.82	1.000	1.000
5	2429.94	1.000	1.000

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1B
ANALYSIS RESULTS FOR VARIABLE MFUTES (Fecal-urate testosterone content of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.892	0.001	1.908	0.131	USE NON-PARAMETRIC TESTS

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BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	322.93	37.48	14.16	11.61	288.27, 357.59
0.078	8	298.65	56.12	19.84	18.79	251.73, 345.56
0.31	8	299.48	105.99	37.47	35.39	210.87, 388.09
1.25	9	295.99	41.71	13.90	14.09	263.93, 328.06
5	8	244.40	37.72	13.34	15.43	212.87, 275.94

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	330.93	264.54	372.06	.	.
0.078	291.54	224.52	410.38	92.48	7.52
0.31	270.75	195.01	533.04	92.74	7.26
1.25	299.36	211.86	356.23	91.66	8.34
5	237.48	199.85	314.01	75.68	24.32

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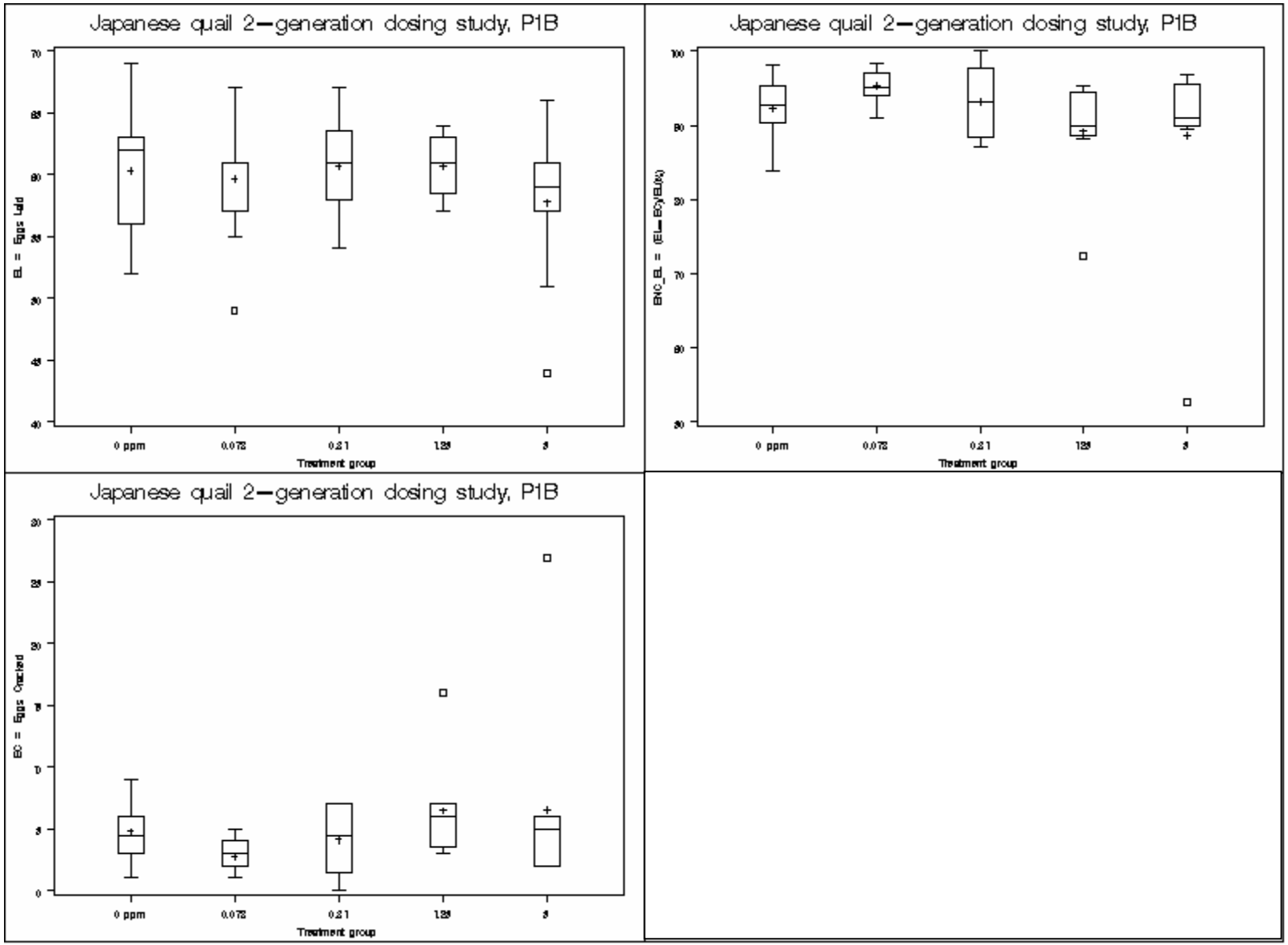
NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

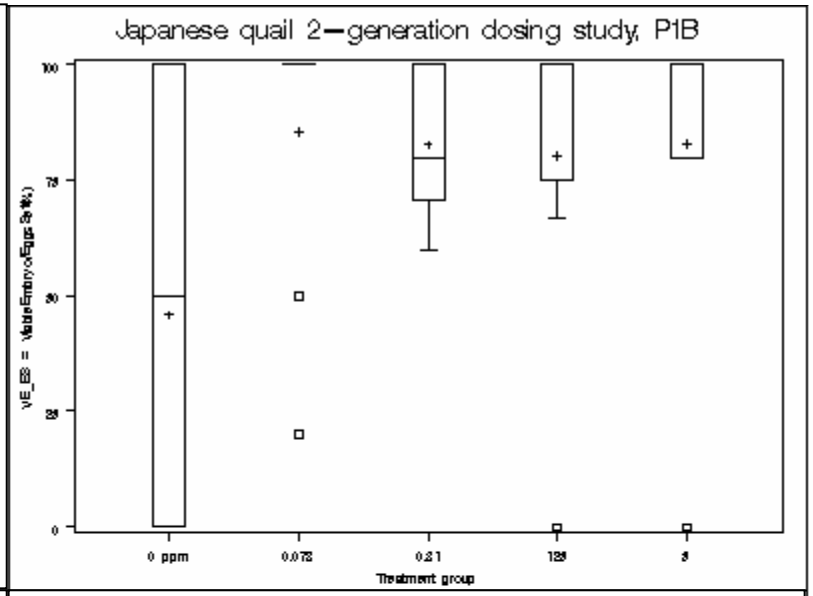
Degrees of Freedom	TestStat	P-value
4	9.62	0.047

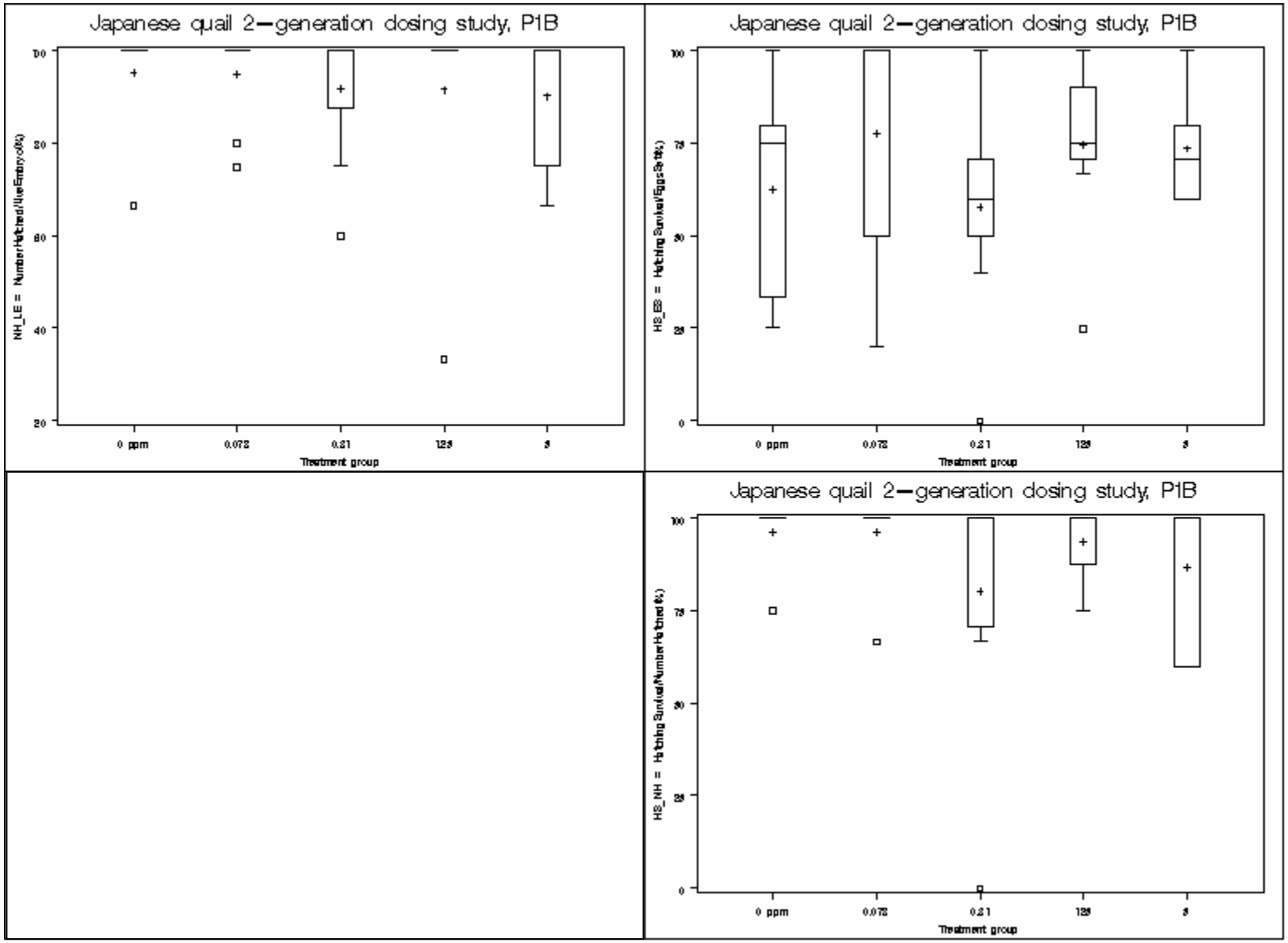
MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

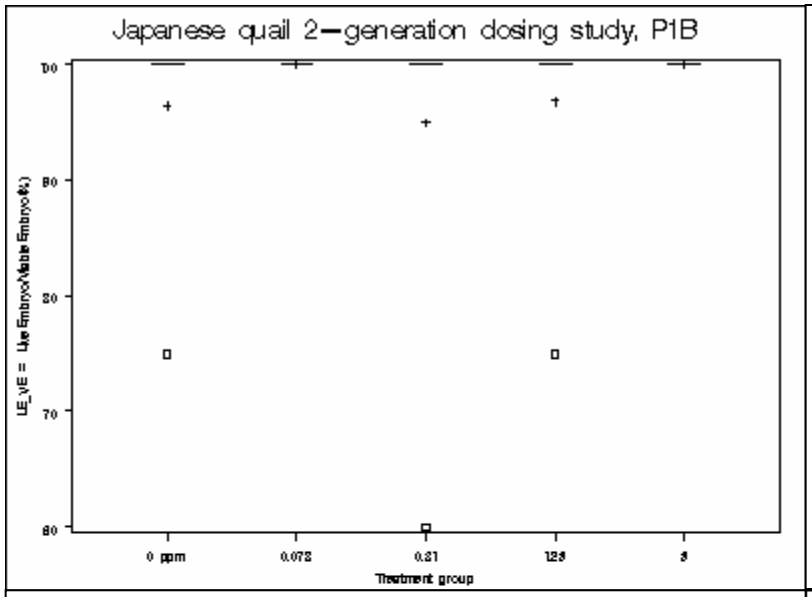
Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	330.93	.	.
0.078	291.54	0.489	0.102
0.31	270.75	0.340	0.064
1.25	299.36	0.525	0.152
5	237.48	0.033	0.005

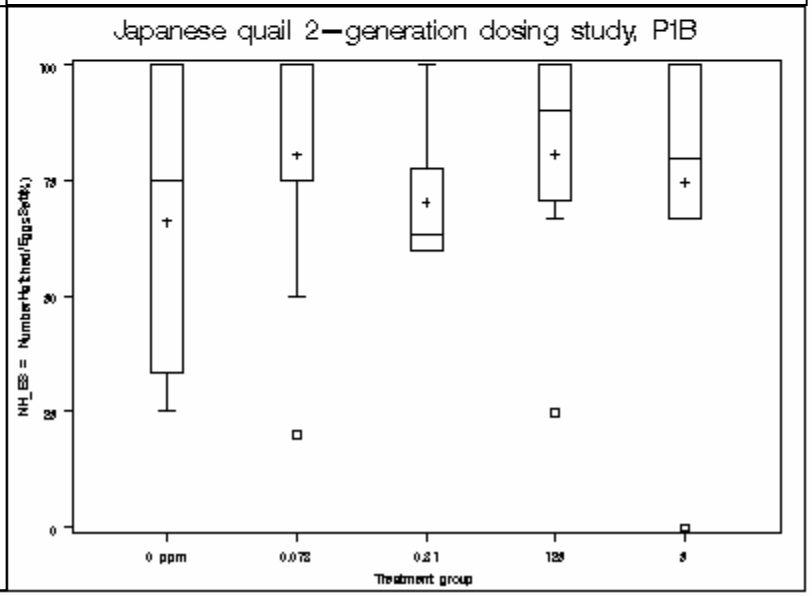
SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	1.25	5
Jonckheere	1.25	5

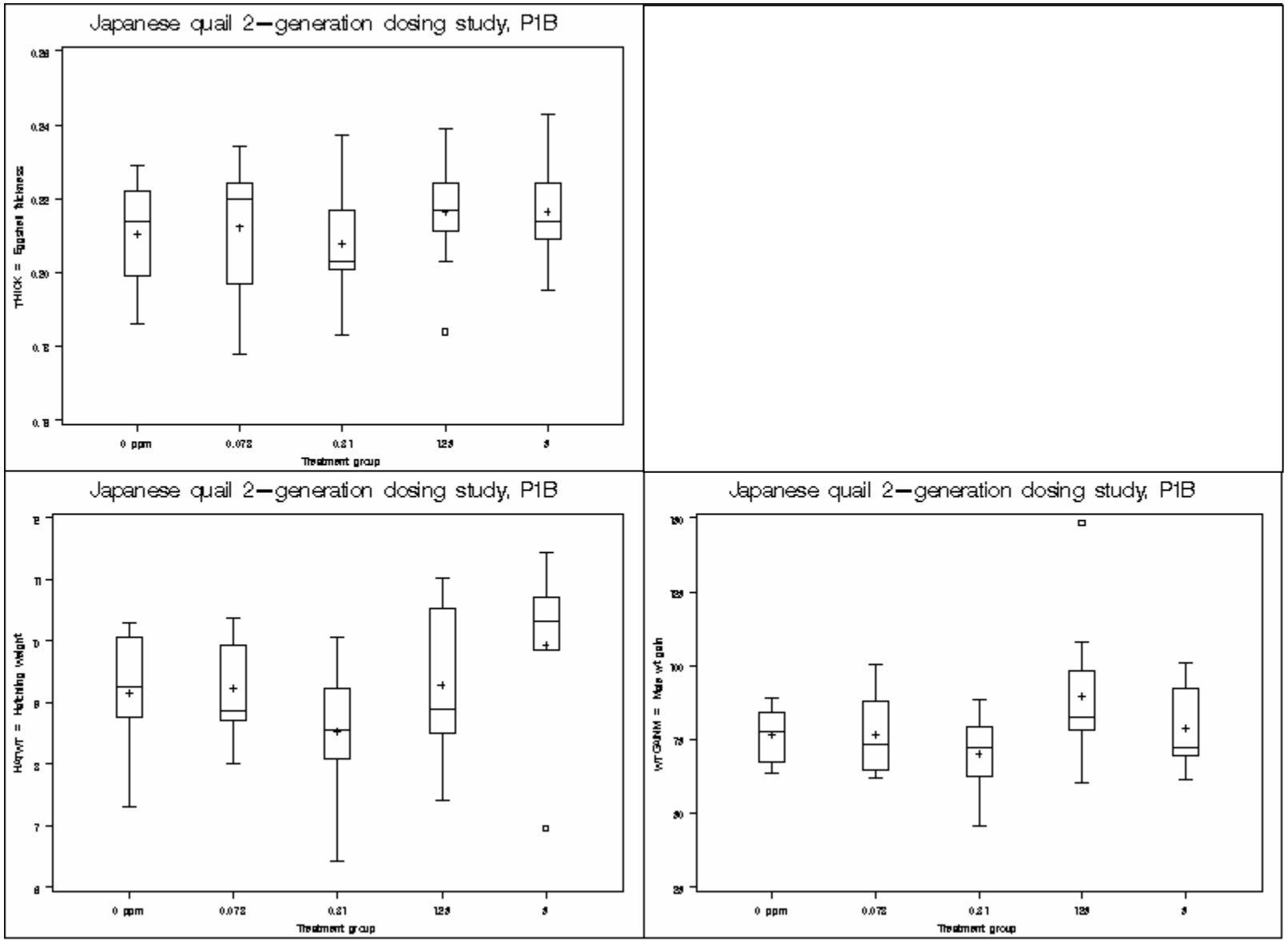

Japanese quail 2−generation dosing study, P1B
EL = Eggs Laid
0 ppm
0.073
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1B
ENC_EL = (EL÷ EC)*EL(%)
0 ppm
0.073
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1B
EC = Eggs Cracked
0 ppm
0.073
0.21
1.25
5
Treatment group

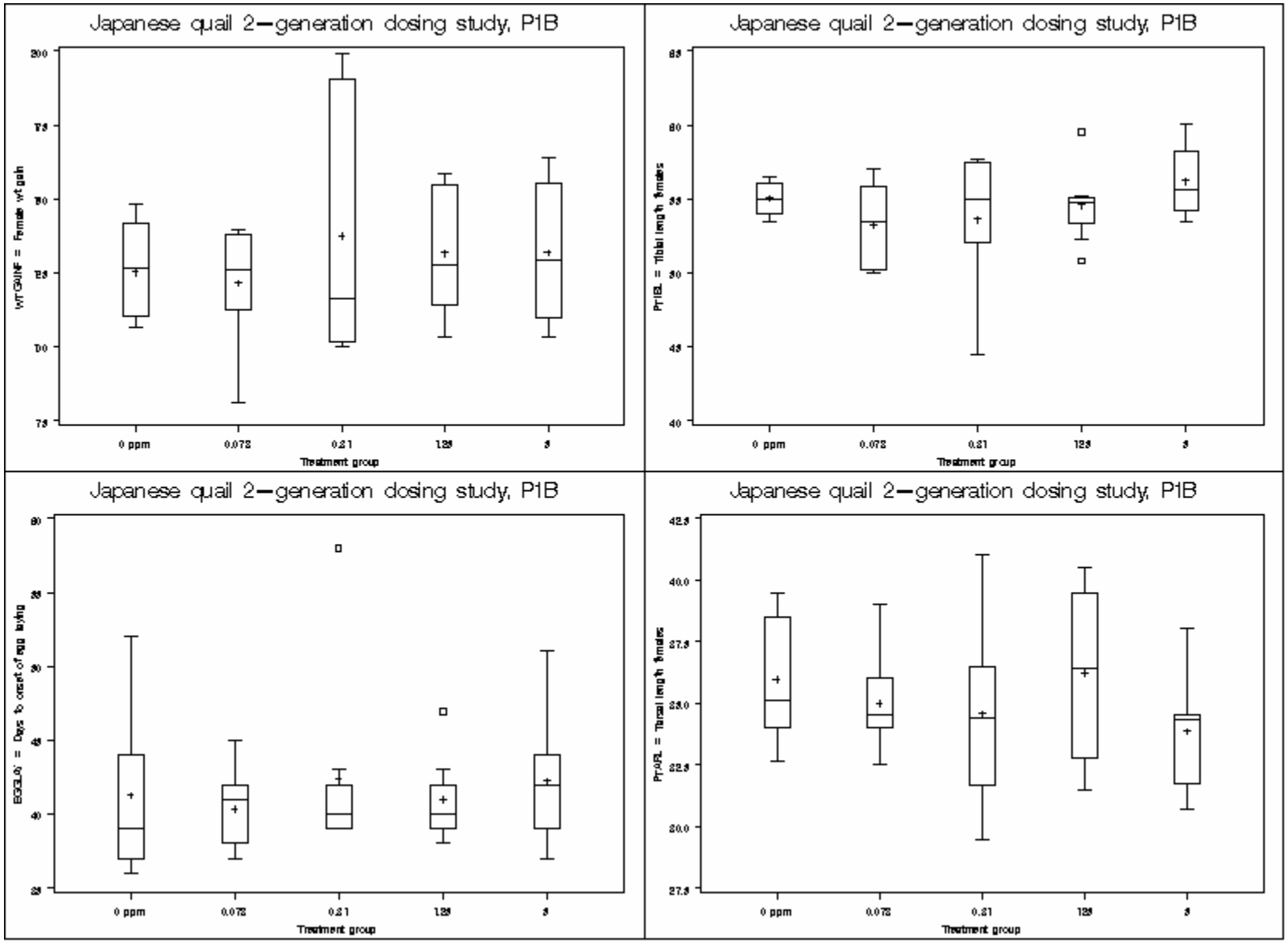

Japanese quail 2−generation dosing study, P1B
100
75
50
0
0 ppm
0.073
0.21
128
Treatment group

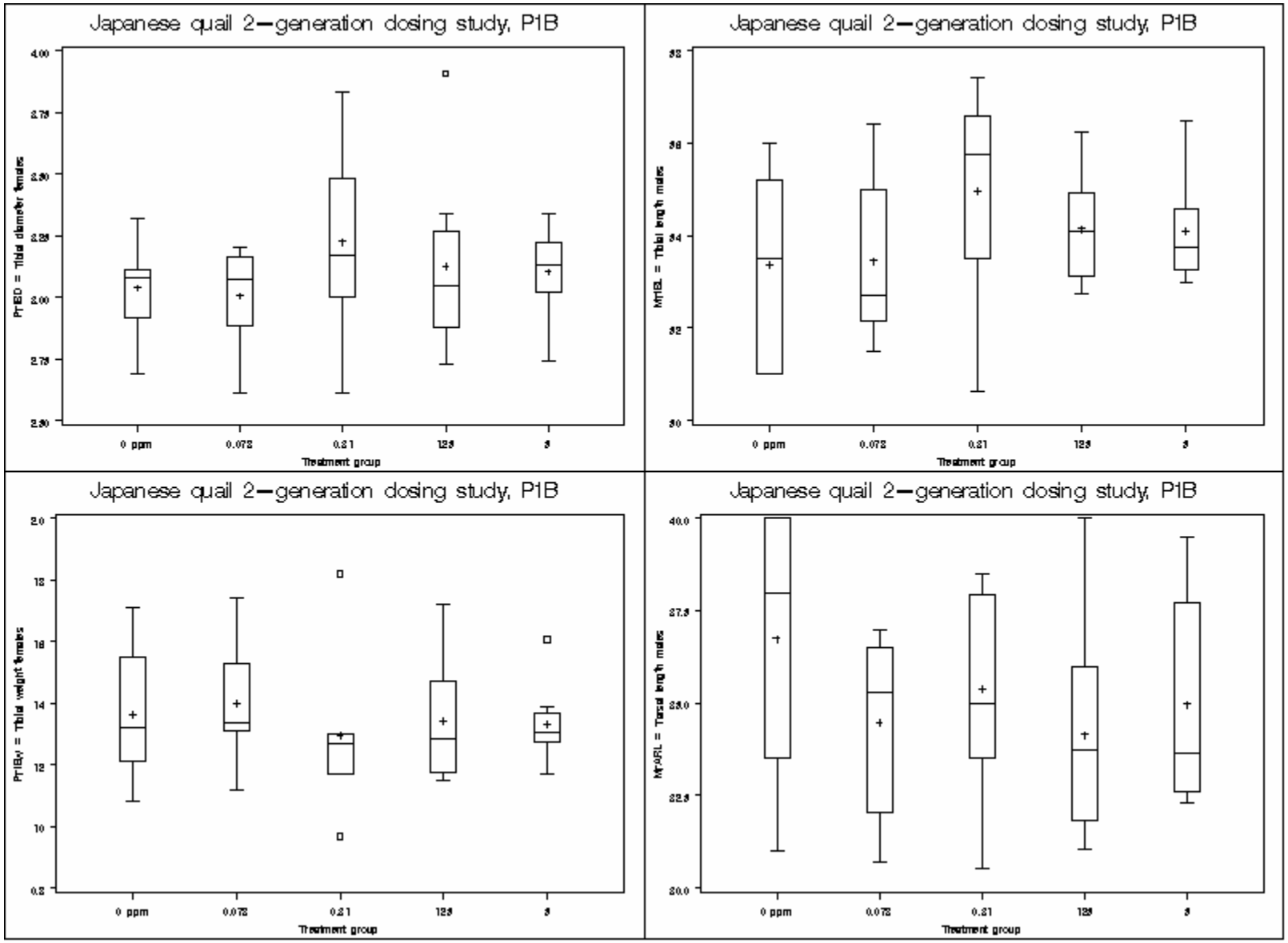

Japanese quail 2−generation dosing study, P1B
NH_LE = Number Hatched/Live Embryos(%)
100
80
60
40
20
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1B
HS_EB = Hatching Survival/Eggs Set(%)
100
75
50
25
0
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1B
HS_NH = Hatching Survival/Number Hatched(%)
100
75
50
25
0
0 ppm
0.073
0.21
128
5
Treatment group

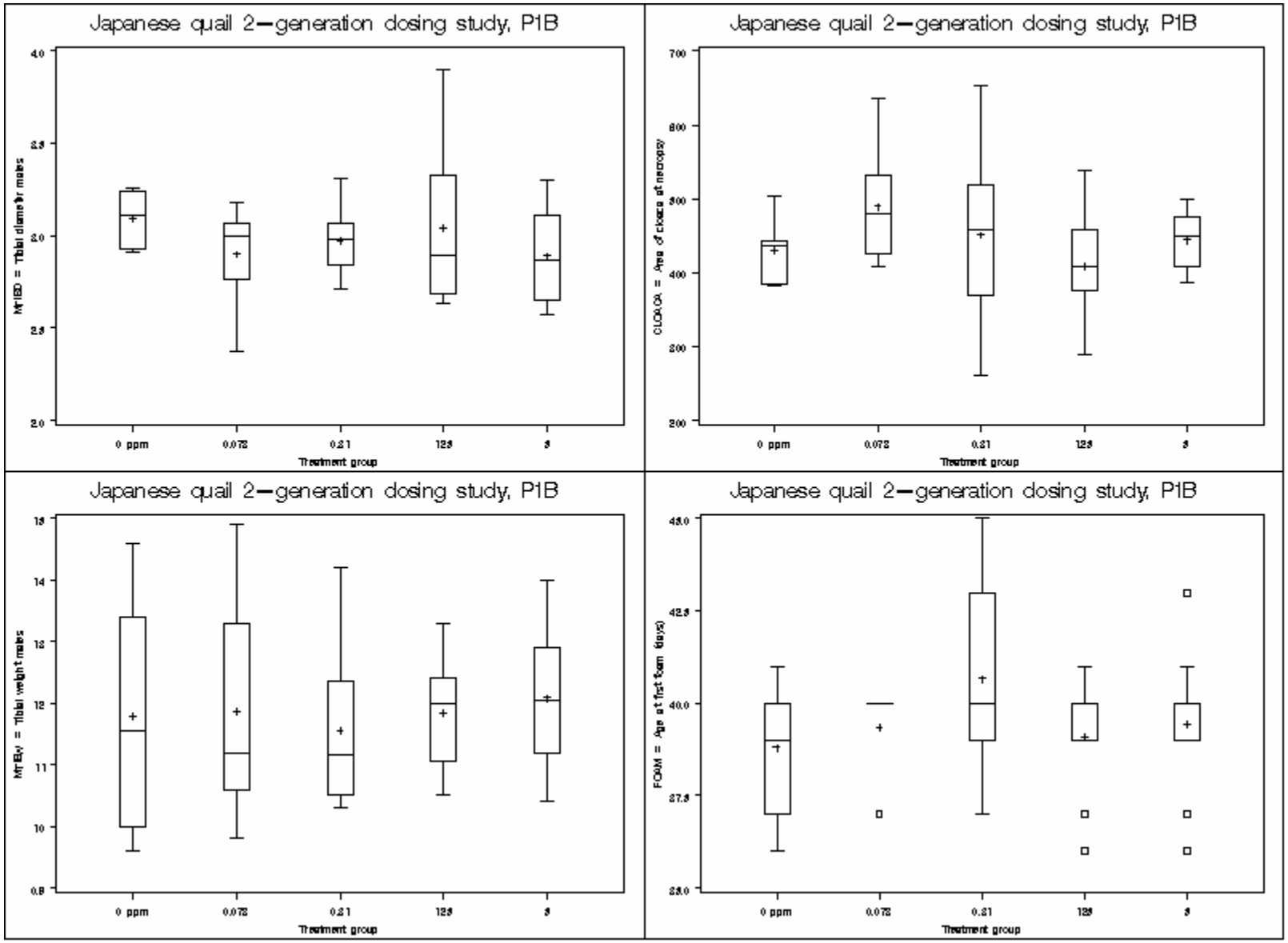

Japanese quail 2−generation dosing study, P1B
LE_VE = Live Embryo/Viable Embryo(%)
100
90
80
70
60
0 ppm
0.073
0.21
125
5
Treatment group

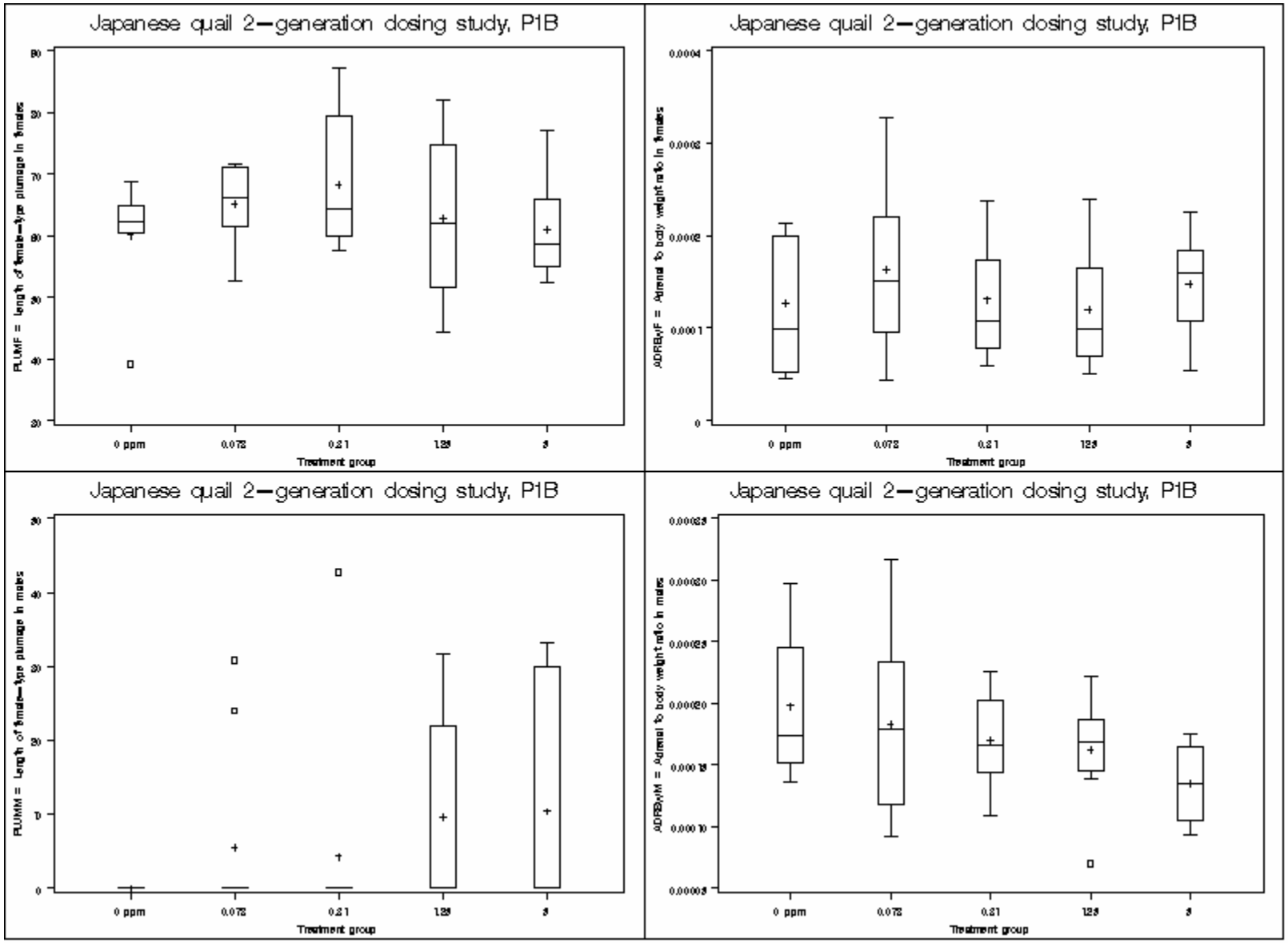

Japanese quail 2−generation dosing study, P1B
NH_ES = Number Hatched/Eggs Set(%)
100
75
50
25
0
0 ppm
0.073
0.21
125
5
Treatment group

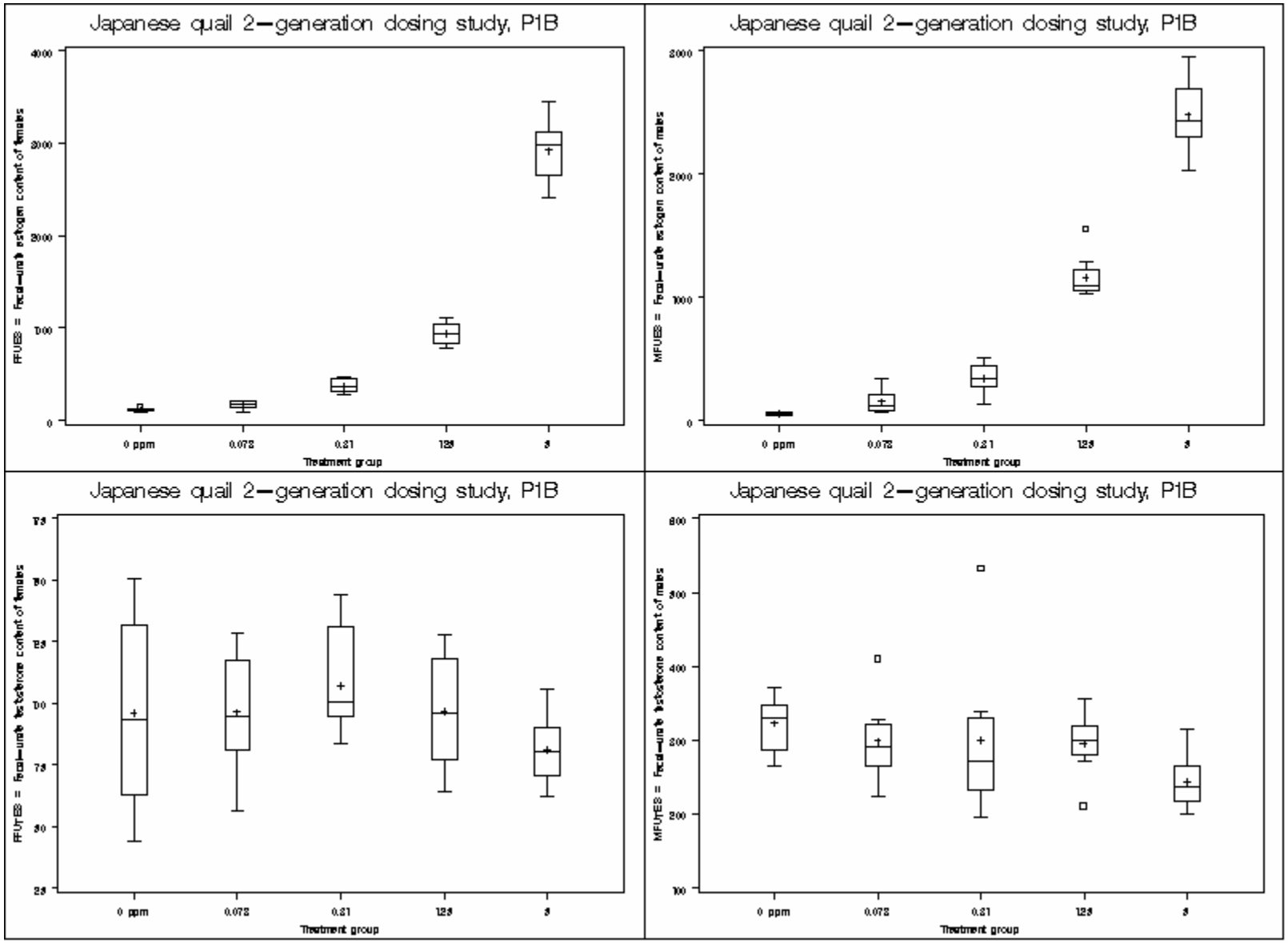

Japanese quail 2−generation dosing study, P1B
THICK = Eggshell thickness
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
HATWT = Hatching weight
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
WTGAINM = Male wt gain
0 ppm
0.073
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1B
WTFEMINF = Female wt gain
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
P1TIBL = Tibial length females
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
EGGLAY = Days to onset of egg laying
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
P1TARL = Tarsal length females
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1B
PrTBD = Tibial diameter females
Treatment group
0 ppm
0.073
0.21
125
5
Japanese quail 2−generation dosing study, P1B
MnTBL = Tibial length males
Treatment group
0 ppm
0.073
0.21
125
5
Japanese quail 2−generation dosing study, P1B
PrTBwt = Tibial weight females
Treatment group
0 ppm
0.073
0.21
125
5
Japanese quail 2−generation dosing study, P1B
MnTARL = Tarsal length males
Treatment group
0 ppm
0.073
0.21
125
5


Japanese quail 2−generation dosing study, P1B
MrTIBD = Tibial diameter males
4.0
3.5
3.0
2.5
2.0
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
CLOACA = Area of cloaca at necropsy
700
600
500
400
300
200
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
MrTiBw = Tibial weight males
15
14
13
12
11
10
9
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
FOAM = Age at first foam (days)
45.0
42.5
40.0
37.5
35.0
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1B
PLUMF = Length of female−type plumage in females
0 ppm
0.072
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1B
ADRBxyF = Adrenal to body weight ratio in females
0 ppm
0.072
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1B
PLUMM = Length of female−type plumage in males
0 ppm
0.072
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1B
ADRBxyM = Adrenal to body weight ratio in males
0 ppm
0.072
0.21
1.25
5
Treatment group


Japanese quail 2−generation dosing study, P1B
FFUES = Fecal−urate estrogen content of females
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
MFUES = Fecal−urate estrogen content of males
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
FFUTES = Fecal−urate testosterone content of females
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1B
MFUTES = Fecal−urate testosterone content of males
0 ppm
0.073
0.21
125
5
Treatment group

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE EL (Eggs Laid)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.898	0.008	0.816	0.527	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	40.50	8.62	2.73	21.28	34.33, 46.67
0.078	3	38.00	8.54	4.93	22.48	16.78, 59.22
0.31	5	38.40	3.44	1.54	8.95	34.13, 42.67
1.25	6	43.00	7.46	3.04	17.34	35.17, 50.83
5	6	42.00	2.76	1.13	6.56	39.11, 44.89

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	41.50	19.00	51.00	.	.
0.078	39.00	29.00	46.00	93.83	6.17
0.31	40.00	33.00	41.00	94.81	5.19
1.25	44.50	31.00	53.00	106.17	-6.17
5	42.00	39.00	46.00	103.70	-3.70

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.29	0.510

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	41.50	.	.
0.078	39.00	1.000	0.306
0.31	40.00	0.476	0.133
1.25	44.50	1.000	0.573
5	42.00	1.000	0.685

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE NEG_EC (Eggs Cracked)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.799	<.001	1.763	0.168	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	6.00	5.40	1.71	89.92	2.14, 9.86
0.078	3	1.33	0.58	0.33	43.30	0.00, 2.77
0.31	5	2.80	1.30	0.58	46.57	1.18, 4.42
1.25	6	7.33	3.20	1.31	43.69	3.97, 10.70
5	6	7.17	6.74	2.75	93.98	0.10, 14.24

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	4.50	2.00	20.00	.	.
0.078	1.00	1.00	2.00	22.22	77.78
0.31	3.00	1.00	4.00	46.67	53.33
1.25	8.00	3.00	11.00	122.22	-22.22
5	4.50	2.00	20.00	119.44	-19.44

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	11.18	0.025

MannWhit(Bon) - testing each trt median signif. greater than control
Jonckheere - test assumes dose-response relationship, testing positive trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	4.50	.	.
0.078	1.00	1.000	0.992
0.31	3.00	1.000	0.965
1.25	8.00	0.497	0.280
5	4.50	1.000	0.167

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE ENC_EL ((EL-EC)/EL (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.812	<.001	2.133	0.106	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	82.67	17.72	5.60	21.44	69.99, 95.34
0.078	3	96.12	2.62	1.51	2.73	89.61, 100.00
0.31	5	92.71	3.30	1.48	3.56	88.62, 96.81
1.25	6	82.43	8.98	3.67	10.89	73.01, 91.86
5	6	83.55	14.39	5.87	17.22	68.45, 98.64

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	89.06	47.37	96.08	.	.
0.078	97.44	93.10	97.83	116.28	-16.28
0.31	90.91	90.00	97.30	112.15	-12.15
1.25	82.00	67.74	92.31	99.72	0.28
5	89.50	56.52	94.87	101.06	-1.06

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	8.76	0.067

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	89.06	.	.
0.078	97.44	1.000	0.979
0.31	90.91	1.000	0.932
1.25	82.00	0.742	0.309
5	89.50	1.000	0.188

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE VE_ES (ViableEmbryo/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.730	0.001	0.773	0.572	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	90.42	13.78	5.21	15.24	77.67, 100.00
0.078	1	91.30	.	.	.	. , .
0.31	3	95.77	4.17	2.41	4.35	85.42, 100.00
1.25	1	96.30	.	.	.	. , .
5	1	76.92	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	96.15	60.87	100.00	.	.
0.078	91.30	91.30	91.30	100.97	-0.97
0.31	95.65	91.67	100.00	105.92	-5.92
1.25	96.30	96.30	96.30	106.49	-6.49
5	76.92	76.92	76.92	85.07	14.93

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.87	0.579

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	96.15	.	.
0.078	91.30	1.000	0.255
0.31	95.65	1.000	0.574
1.25	96.30	1.000	0.653
5	76.92	0.818	0.367

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE LE_VE (LiveEmbryo/ViableEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.661	<.001	0.753	0.583	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	94.33	10.47	3.96	11.10	84.64, 100.00
0.078	1	100.00	.	.	.	. , .
0.31	3	96.97	2.62	1.52	2.71	90.45, 100.00
1.25	1	96.15	.	.	.	. , .
5	1	90.00	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	71.43	100.00	.	.
0.078	100.00	100.00	100.00	106.01	-6.01
0.31	95.45	95.45	100.00	102.80	-2.80
1.25	96.15	96.15	96.15	101.94	-1.94
5	90.00	90.00	90.00	95.41	4.59

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.87	0.579

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	100.00	1.000	0.773
0.31	95.45	1.000	0.420
1.25	96.15	1.000	0.401
5	90.00	0.767	0.178

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE NH_ES (NumberHatched/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.804	0.008	1.953	0.195	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	77.71	19.73	7.46	25.39	59.46, 95.96
0.078	1	91.30	.	.	.	. , .
0.31	3	83.85	2.89	1.67	3.44	76.67, 91.02
1.25	1	92.59	.	.	.	. , .
5	1	57.69	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	87.50	39.13	92.31	.	.
0.078	91.30	91.30	91.30	117.49	-17.49
0.31	83.33	81.25	86.96	107.90	-7.90
1.25	92.59	92.59	92.59	119.15	-19.15
5	57.69	57.69	57.69	74.24	25.76

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.63	0.229

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	87.50	.	.
0.078	91.30	1.000	0.862
0.31	83.33	1.000	0.322
1.25	92.59	1.000	0.680
5	57.69	0.823	0.394

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE NH_LE (NumberHatched/LiveEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.897	0.121	1.109	0.416	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	90.03	10.88	4.11	12.08	79.97, 100.00
0.078	1	100.00	.	.	.	. , .
0.31	3	90.58	8.08	4.66	8.92	70.51, 100.00
1.25	1	100.00	.	.	.	. , .
5	1	83.33	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	93.33	69.23	100.00	.	.
0.078	100.00	100.00	100.00	111.07	-11.07
0.31	95.24	81.25	95.24	100.60	-0.60
1.25	100.00	100.00	100.00	111.07	-11.07
5	83.33	83.33	83.33	92.56	7.44

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	0.54	0.710

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	90.03	.	91.83	.	0.885	1.000	0.885	0.969	.
0.078	100.00	0.992	91.83	0.650	.	0.925	1.000	0.778	.
0.31	90.58	0.915	91.83	0.720	.	.	0.925	0.969	.
1.25	100.00	0.992	91.83	0.704	.	.	.	0.778	.
5	83.33	0.669	83.33	0.376	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE HS_ES (HatchlingSurvival/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.832	0.017	1.465	0.299	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	71.20	18.84	7.12	26.46	53.78, 88.62
0.078	1	91.30	.	.	.	. , .
0.31	3	82.40	1.06	0.61	1.28	79.77, 85.02
1.25	1	92.59	.	.	.	. , .
5	1	53.85	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	77.42	34.78	92.31	.	.
0.078	91.30	91.30	91.30	128.24	-28.24
0.31	82.61	81.25	83.33	115.73	-15.73
1.25	92.59	92.59	92.59	130.05	-30.05
5	53.85	53.85	53.85	75.63	24.37

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	1.20	0.380

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	71.20	.	77.46	.	0.777	0.851	0.738	0.851	.
0.078	91.30	0.996	77.46	0.723	.	0.988	1.000	0.524	.
0.31	82.40	0.994	77.46	0.819	.	.	0.980	0.581	.
1.25	92.59	0.997	77.46	0.775	.	.	.	0.495	.
5	53.85	0.481	53.85	0.235	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE HS_NH (HatchlingSurvival/NumberHatched (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.909	0.178	2.153	0.165	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	91.76	8.76	3.31	9.54	83.67, 99.86
0.078	1	100.00	.	.	.	. , .
0.31	3	98.33	2.89	1.67	2.94	91.16, 100.00
1.25	1	100.00	.	.	.	. , .
5	1	93.33	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	90.48	77.27	100.00	.	.
0.078	100.00	100.00	100.00	108.97	-8.97
0.31	100.00	95.00	100.00	107.16	-7.16
1.25	100.00	100.00	100.00	108.97	-8.97
5	93.33	93.33	93.33	101.71	-1.71

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	0.66	0.635

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	91.76	.	94.78	.	0.849	0.735	0.849	1.000	.
0.078	100.00	0.994	94.78	0.725	.	1.000	1.000	0.969	.
0.31	98.33	0.997	94.78	0.822	.	.	1.000	0.977	.
1.25	100.00	0.994	94.78	0.778	.	.	.	0.969	.
5	93.33	0.937	93.33	0.726	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE THICK (Eggshell thickness)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.981	0.850	4.793	0.005	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	0.21	0.02	0.00	7.31	0.20, 0.22
0.078	3	0.21	0.01	0.00	2.37	0.20, 0.22
0.31	5	0.22	0.01	0.00	3.00	0.21, 0.22
1.25	6	0.21	0.01	0.00	3.85	0.20, 0.22
5	6	0.22	0.02	0.01	8.45	0.20, 0.24

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.22	0.19	0.23	.	.
0.078	0.21	0.21	0.22	100.16	-0.16
0.31	0.22	0.21	0.22	102.17	-2.17
1.25	0.21	0.20	0.22	98.35	1.65
5	0.22	0.19	0.24	103.46	-3.46

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.72	0.606

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.22	.	.
0.078	0.21	1.000	0.400
0.31	0.22	1.000	0.682
1.25	0.21	1.000	0.238
5	0.22	1.000	0.559

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE HATWT (Hatchling Weight)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.920	0.247	1.231	0.371	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	8.77	0.69	0.26	7.89	8.13, 9.41
0.078	1	7.30	.	.	.	. , .
0.31	3	8.73	0.38	0.22	4.34	7.79, 9.67
1.25	1	8.00	.	.	.	. , .
5	1	8.80	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	8.90	7.60	9.50	.	.
0.078	7.30	7.30	7.30	83.22	16.78
0.31	8.90	8.30	9.00	99.57	0.43
1.25	8.00	8.00	8.00	91.21	8.79
5	8.80	8.80	8.80	100.33	-0.33

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	1.49	0.293

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	8.77	.	8.77	.	0.273	1.000	0.779	1.000	.
0.078	7.30	0.102	8.38	0.345	.	0.355	0.927	0.490	.
0.31	8.73	0.875	8.38	0.253	.	.	0.844	1.000	.
1.25	8.00	0.409	8.38	0.382	.	.	.	0.889	.
5	8.80	0.908	8.38	0.391	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE SURVWT (Survivor Wt (d14))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.948	0.564	2.314	0.145	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	108.20	6.43	2.43	5.95	102.25, 114.15
0.078	1	94.60	.	.	.	. , .
0.31	3	113.30	1.73	1.00	1.53	109.00, 117.60
1.25	1	113.70	.	.	.	. , .
5	1	110.10	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	110.30	98.30	116.70	.	.
0.078	94.60	94.60	94.60	87.43	12.57
0.31	114.30	111.30	114.30	104.71	-4.71
1.25	113.70	113.70	113.70	105.08	-5.08
5	110.10	110.10	110.10	101.76	-1.76

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	2.28	0.149

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	108.20	.	108.90	.	0.251	0.693	0.884	0.997	.
0.078	94.60	0.093	108.90	0.631	.	0.111	0.210	0.369	.
0.31	113.30	0.998	108.90	0.691	.	.	1.000	0.986	.
1.25	113.70	0.992	108.90	0.685	.	.	.	0.990	.
5	110.10	0.955	108.90	0.697	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE FOOD (Food Consumption)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.986	0.953	0.977	0.438	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	32.27	3.60	1.14	11.16	29.69, 34.85
0.078	3	29.03	1.80	1.04	6.20	24.56, 33.51
0.31	5	32.36	2.22	0.99	6.87	29.60, 35.12
1.25	6	35.73	3.61	1.48	10.12	31.94, 39.53
5	6	34.20	2.54	1.04	7.43	31.53, 36.87

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	31.65	28.30	38.50	.	.
0.078	28.20	27.80	31.10	89.97	10.03
0.31	33.10	28.70	34.40	100.28	-0.28
1.25	37.15	29.50	38.90	110.73	-10.73
5	33.90	31.30	37.20	105.98	-5.98

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	2.80	0.047

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	32.27	.	33.04	.	0.520	1.000	0.227	0.749	.
0.078	29.03	0.193	33.04	0.733	.	0.591	0.039	0.161	.
0.31	32.36	0.868	33.04	0.793	.	.	0.398	0.862	.
1.25	35.73	1.000	33.04	0.819	.	.	.	0.910	.
5	34.20	0.994	33.04	0.829	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINM (Male wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.932	0.358	1.282	0.353	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	219.43	20.39	7.71	9.29	200.57, 238.29
0.078	1	211.10	.	.	.	. , .
0.31	3	203.60	9.82	5.67	4.82	179.21, 227.99
1.25	1	235.10	.	.	.	. , .
5	1	271.60	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	213.70	191.60	248.10	.	.
0.078	211.10	211.10	211.10	96.20	3.80
0.31	201.50	195.00	214.30	92.79	7.21
1.25	235.10	235.10	235.10	107.14	-7.14
5	271.60	271.60	271.60	123.78	-23.78

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	2.81	0.100

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	219.43	.	220.35	.	0.992	0.725	0.924	0.147	.
0.078	211.10	0.754	220.35	0.603	.	0.996	0.879	0.227	.
0.31	203.60	0.364	220.35	0.648	.	.	0.596	0.070	.
1.25	235.10	0.989	220.35	0.656	.	.	.	0.640	.
5	271.60	1.000	220.35	0.668	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINF (Female wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.951	0.183	1.971	0.130	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	276.05	14.44	4.57	5.23	265.72, 286.38
0.078	3	207.07	36.44	21.04	17.60	116.55, 297.58
0.31	5	277.42	21.47	9.60	7.74	250.76, 304.08
1.25	6	262.95	17.46	7.13	6.64	244.62, 281.28
5	6	250.42	11.44	4.67	4.57	238.41, 262.43

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	276.90	251.50	296.10	.	.
0.078	224.40	165.20	231.60	75.01	24.99
0.31	281.00	242.60	301.80	100.50	-0.50
1.25	263.35	236.60	287.40	95.25	4.75
5	247.90	238.90	266.80	90.71	9.29

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	9.51	<.001

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	276.05	.	276.05	.	<.001	1.000	0.651	0.085	.
0.078	207.07	<.001	256.14	0.067	.	<.001	0.002	0.021	.
0.31	277.42	0.889	256.14	0.037	.	.	0.698	0.145	.
1.25	262.95	0.266	256.14	0.029	.	.	.	0.766	.
5	250.42	0.023	250.42	0.008	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	<lowest dose	0.078
Williams	0.078	0.31

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE EGGLAY (Days to onset of egg laying)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.951	0.176	0.152	0.960	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	40.90	3.14	0.99	7.68	38.65, 43.15
0.078	3	42.67	3.06	1.76	7.16	35.08, 50.26
0.31	5	45.60	3.65	1.63	8.00	41.07, 50.13
1.25	6	40.17	2.79	1.14	6.94	37.24, 43.09
5	6	42.50	2.88	1.18	6.78	39.48, 45.52

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	40.50	37.00	45.00	.	.
0.078	42.00	40.00	46.00	104.32	-4.32
0.31	46.00	41.00	51.00	111.49	-11.49
1.25	41.00	36.00	44.00	98.21	1.79
5	43.50	39.00	46.00	103.91	-3.91

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	2.59	0.061

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	40.90	.	42.50	.	0.907	0.072	0.990	0.854	.
0.078	42.67	0.983	42.50	0.856	.	0.698	0.785	1.000	.
0.31	45.60	1.000	42.50	0.914	.	.	0.055	0.482	.
1.25	40.17	0.682	41.33	0.747	.	.	.	0.693	.
5	42.50	0.989	41.33	0.758	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBL (Tibial length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.986	0.954	0.673	0.617	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	55.53	2.67	0.84	4.81	53.62, 57.44
0.078	3	52.98	1.22	0.70	2.30	49.95, 56.00
0.31	5	54.91	2.37	1.06	4.32	51.97, 57.85
1.25	6	54.49	3.11	1.27	5.72	51.22, 57.76
5	6	54.26	1.97	0.81	3.64	52.19, 56.33

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	55.68	51.52	60.00	.	.
0.078	53.18	51.67	54.08	95.40	4.60
0.31	54.34	52.31	58.63	98.87	1.13
1.25	55.47	48.50	56.82	98.12	1.88
5	53.39	52.70	57.69	97.70	2.30

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	0.69	0.603

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	55.53	.	55.53	.	0.543	0.991	0.927	0.860	.
0.078	52.98	0.205	54.32	0.280	.	0.828	0.911	0.949	.
0.31	54.91	0.683	54.32	0.245	.	.	0.999	0.993	.
1.25	54.49	0.518	54.32	0.235	.	.	.	1.000	.
5	54.26	0.432	54.26	0.226	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE FTARL (Tarsal length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.972	0.585	3.916	0.013	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	34.16	1.79	0.57	5.25	32.88, 35.45
0.078	3	33.93	2.08	1.20	6.12	28.78, 39.09
0.31	5	34.35	0.74	0.33	2.16	33.43, 35.27
1.25	6	34.73	1.15	0.47	3.31	33.53, 35.94
5	6	36.07	0.57	0.23	1.57	35.47, 36.67

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	33.90	31.82	37.30	.	.
0.078	32.74	32.73	36.33	99.32	0.68
0.31	34.47	33.31	35.17	100.54	-0.54
1.25	34.68	33.25	36.39	101.67	-1.67
5	36.03	35.31	37.07	105.58	-5.58

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	7.24	0.124

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	33.90	.	.
0.078	32.74	1.000	0.306
0.31	34.47	1.000	0.617
1.25	34.68	1.000	0.834
5	36.03	1.000	0.994

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBD (Tibial diameter of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.969	0.517	2.180	0.100	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	3.21	0.47	0.15	14.71	2.87, 3.54
0.078	3	2.89	0.27	0.16	9.29	2.22, 3.56
0.31	5	3.01	0.32	0.14	10.76	2.61, 3.41
1.25	6	2.93	0.30	0.12	10.28	2.61, 3.24
5	6	3.08	0.17	0.07	5.52	2.90, 3.25

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.32	2.31	3.74	.	.
0.078	2.74	2.73	3.20	90.14	9.86
0.31	2.83	2.73	3.37	93.95	6.05
1.25	2.86	2.62	3.48	91.34	8.66
5	3.12	2.76	3.21	95.97	4.03

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	0.82	0.522

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.21	.	3.21	.	0.664	0.855	0.565	0.954	.
0.078	2.89	0.274	2.99	0.216	.	0.989	1.000	0.944	.
0.31	3.01	0.426	2.99	0.174	.	.	0.995	0.998	.
1.25	2.93	0.216	2.99	0.162	.	.	.	0.949	.
5	3.08	0.567	2.99	0.165	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBW (Tibial weight of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.986	0.956	1.069	0.393	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	1.30	0.13	0.04	10.23	1.21, 1.40
0.078	3	1.09	0.03	0.02	2.75	1.02, 1.16
0.31	5	1.44	0.09	0.04	6.42	1.32, 1.55
1.25	6	1.27	0.13	0.05	10.60	1.13, 1.41
5	6	1.29	0.13	0.05	9.70	1.16, 1.43

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.29	1.09	1.55	.	.
0.078	1.09	1.06	1.12	83.65	16.35
0.31	1.49	1.31	1.51	110.36	-10.36
1.25	1.24	1.10	1.47	97.21	2.79
5	1.33	1.14	1.42	99.26	0.74

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	4.01	0.012

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.30	.	1.31	.	0.086	0.276	0.976	1.000	.
0.078	1.09	0.023	1.31	0.594	.	0.005	0.264	0.154	.
0.31	1.44	1.000	1.31	0.631	.	.	0.165	0.305	.
1.25	1.27	0.625	1.28	0.469	.	.	.	0.995	.
5	1.29	0.803	1.28	0.479	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	<lowest dose	0.078
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBL (Tibial length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.945	0.529	3.000	0.087	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	54.73	1.89	0.71	3.44	52.98, 56.47
0.078	1	51.54	.	.	.	. , .
0.31	3	52.56	1.16	0.67	2.21	49.67, 55.46
1.25	1	53.34	.	.	.	. , .
5	1	56.06	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	55.39	51.74	56.64	.	.
0.078	51.54	51.54	51.54	94.18	5.82
0.31	52.45	51.46	53.78	96.05	3.95
1.25	53.34	53.34	53.34	97.47	2.53
5	56.06	56.06	56.06	102.44	-2.44

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	1.72	0.239

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	54.73	.	54.73	.	0.473	0.430	0.938	0.946	.
0.078	51.54	0.200	53.11	0.243	.	0.984	0.942	0.413	.
0.31	52.56	0.177	53.11	0.134	.	.	0.994	0.460	.
1.25	53.34	0.602	53.11	0.269	.	.	.	0.798	.
5	56.06	0.986	53.11	0.275	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE MTARL (Tarsal length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.906	0.161	1.758	0.230	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	32.37	1.47	0.56	4.54	31.01, 33.73
0.078	1	31.25	.	.	.	. , .
0.31	3	31.36	0.56	0.32	1.78	29.98, 32.74
1.25	1	32.76	.	.	.	. , .
5	1	35.39	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.32	30.79	34.29	.	.
0.078	31.25	31.25	31.25	96.53	3.47
0.31	31.62	30.72	31.74	96.87	3.13
1.25	32.76	32.76	32.76	101.20	-1.20
5	35.39	35.39	35.39	109.32	-9.32

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	2.00	0.188

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	32.37	.	32.37	.	0.922	0.789	0.998	0.282	.
0.078	31.25	0.574	32.25	0.545	.	1.000	0.917	0.254	.
0.31	31.36	0.419	32.25	0.557	.	.	0.877	0.144	.
1.25	32.76	0.950	32.25	0.597	.	.	.	0.629	.
5	35.39	1.000	32.25	0.609	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBD (Tibial diameter of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.914	0.210	0.931	0.492	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	3.12	0.51	0.19	16.28	2.65, 3.58
0.078	1	3.01	.	.	.	. , .
0.31	3	3.25	0.41	0.24	12.55	2.24, 4.26
1.25	1	2.38	.	.	.	. , .
5	1	2.96	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.24	2.40	3.89	.	.
0.078	3.01	3.01	3.01	96.61	3.39
0.31	3.46	2.78	3.51	104.31	-4.31
1.25	2.38	2.38	2.38	76.39	23.61
5	2.96	2.96	2.96	95.00	5.00

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	0.64	0.647

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.12	.	3.14	.	1.000	0.993	0.633	0.998	.
0.078	3.01	0.839	3.14	0.605	.	0.992	0.882	1.000	.
0.31	3.25	0.965	3.14	0.652	.	.	0.559	0.983	.
1.25	2.38	0.296	2.67	0.274	.	.	.	0.908	.
5	2.96	0.804	2.67	0.280	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBW (Tibial weight of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.936	0.405	1.426	0.309	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	1.04	0.10	0.04	9.46	0.95, 1.13
0.078	1	1.04	.	.	.	. , .
0.31	3	0.99	0.11	0.06	11.23	0.72, 1.27
1.25	1	0.99	.	.	.	. , .
5	1	1.51	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.04	0.90	1.13	.	.
0.078	1.04	1.04	1.04	100.41	-0.41
0.31	0.95	0.91	1.12	95.91	4.09
1.25	0.99	0.99	0.99	95.59	4.41
5	1.51	1.51	1.51	145.79	-45.79

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	5.46	0.020

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.04	.	1.06	.	1.000	0.970	0.992	0.015	.
0.078	1.04	0.907	1.06	0.671	.	0.994	0.996	0.064	.
0.31	0.99	0.672	1.06	0.749	.	.	1.000	0.014	.
1.25	0.99	0.756	1.06	0.724	.	.	.	0.040	.
5	1.51	1.000	1.06	0.736	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE CLOACA (Cloacal area at necropsy (males))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.923	0.275	3.871	0.049	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	543.37	51.44	19.44	9.47	495.79, 590.95
0.078	1	570.05	.	.	.	. , .
0.31	3	589.55	153.85	88.82	26.10	207.38, 971.73
1.25	1	558.53	.	.	.	. , .
5	1	645.04	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	549.11	463.39	602.98	.	.
0.078	570.05	570.05	570.05	104.91	-4.91
0.31	650.24	414.62	703.80	108.50	-8.50
1.25	558.53	558.53	558.53	102.79	-2.79
5	645.04	645.04	645.04	118.71	-18.71

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.27	0.686

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	549.11	.	.
0.078	570.05	1.000	0.586
0.31	650.24	1.000	0.797
1.25	558.53	1.000	0.733
5	645.04	1.000	0.859

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE FOAM (Age at first foam (days))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.939	0.539	2.200	0.205	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	4	37.50	1.29	0.65	3.44	35.45, 39.55
0.078	1	41.00	.	.	.	. , .
0.31	3	35.00	1.73	1.00	4.95	30.70, 39.30
1.25	1	36.00	.	.	.	. , .
5	1	39.00	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	37.50	36.00	39.00	.	.
0.078	41.00	41.00	41.00	109.33	-9.33
0.31	34.00	34.00	37.00	93.33	6.67
1.25	36.00	36.00	36.00	96.00	4.00
5	39.00	39.00	39.00	104.00	-4.00

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	5	3.85	0.086

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	37.50	.	38.20	.	0.340	0.308	0.884	0.884	.
0.078	41.00	0.999	38.20	0.741	.	0.081	0.257	0.865	.
0.31	35.00	0.121	36.00	0.154	.	.	0.972	0.270	.
1.25	36.00	0.510	36.00	0.269	.	.	.	0.638	.
5	39.00	0.985	36.00	0.274	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMF (Female-type plumage length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.950	0.167	1.171	0.347	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	60.55	7.11	2.25	11.75	55.46, 65.64
0.078	3	58.34	10.43	6.02	17.88	32.42, 84.25
0.31	5	60.26	8.04	3.60	13.35	50.27, 70.24
1.25	6	62.85	9.26	3.78	14.74	53.13, 72.57
5	6	68.85	5.78	2.36	8.39	62.79, 74.92

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	59.59	48.22	71.53	.	.
0.078	60.28	47.07	67.66	96.34	3.66
0.31	56.93	52.44	71.20	99.51	0.49
1.25	62.36	52.75	73.70	103.80	-3.80
5	70.29	57.85	73.43	113.71	-13.71

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	1.46	0.243

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	60.55	.	62.40	.	0.992	1.000	0.978	0.270	.
0.078	58.34	0.694	62.40	0.727	.	0.997	0.923	0.342	.
0.31	60.26	0.832	62.40	0.786	.	.	0.981	0.387	.
1.25	62.85	0.961	62.40	0.812	.	.	.	0.676	.
5	68.85	1.000	62.40	0.822	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMM (Female-type plumage length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.627	<.001	12.308	0.002	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	.	. , .
0.078	1	31.32	.	.	.	. , .
0.31	3	18.54	32.11	18.54	173.21	0.00, 98.31
1.25	1	71.59	.	.	.	. , .
5	1	86.24	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	31.32	31.32	31.32	.	.
0.31	0.00	0.00	55.62	.	.
1.25	71.59	71.59	71.59	.	.
5	86.24	86.24	86.24	.	.

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	9.64	0.047

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	31.32	1.000	0.996
0.31	0.00	1.000	0.963
1.25	71.59	1.000	0.993
5	86.24	1.000	0.999

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWF (Adrenal to Body Weight ratio in female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.909	0.014	0.911	0.473	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	0.00	0.00	0.00	63.85	0.00, 0.00
0.078	3	0.00	0.00	0.00	50.44	0.00, 0.00
0.31	5	0.00	0.00	0.00	56.52	0.00, 0.00
1.25	6	0.00	0.00	0.00	59.00	0.00, 0.00
5	6	0.00	0.00	0.00	81.90	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	110.71	-10.71
0.31	0.00	0.00	0.00	131.62	-31.62
1.25	0.00	0.00	0.00	82.62	17.38
5	0.00	0.00	0.00	98.72	1.28

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	0.40	0.809

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.999	0.904	0.986	1.000	.
0.078	0.00	0.913	0.00	0.683	.	0.992	0.974	0.999	.
0.31	0.00	0.984	0.00	0.736	.	.	0.739	0.922	.
1.25	0.00	0.659	0.00	0.513	.	.	.	0.993	.
5	0.00	0.842	0.00	0.524	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWM (Adrenal to Body Weight ratio in males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.872	0.056	1.390	0.320	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	41.52	0.00, 0.00
0.078	1	0.00	.	.	.	. , .
0.31	3	0.00	0.00	0.00	5.98	0.00, 0.00
1.25	1	0.00	.	.	.	. , .
5	1	0.00	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	243.91	-143.91
0.31	0.00	0.00	0.00	115.96	-15.96
1.25	0.00	0.00	0.00	145.52	-45.52
5	0.00	0.00	0.00	81.52	18.48

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	8	3.87	0.049

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.035	0.964	0.763	0.987	.
0.078	0.00	1.000	0.00	0.774	.	0.085	0.376	0.073	.
0.31	0.00	0.982	0.00	0.877	.	.	0.949	0.915	.
1.25	0.00	0.997	0.00	0.823	.	.	.	0.724	.
5	0.00	0.731	0.00	0.433	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1A
14:15 Tuesday, October 18, 2005
ANALYSIS RESULTS FOR VARIABLE SEXRC (Sex ratio of F2 chicks)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.603	<.001	0.765	0.576	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	3.28	5.25	1.98	160.09	0.00, 8.13
0.078	1	2.75	.	.	.	. , .
0.31	3	0.70	0.38	0.22	55.04	0.00, 1.66
1.25	1	0.91	.	.	.	. , .
5	1	0.83	.	.	.	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.10	0.25	15.00	.	.
0.078	2.75	2.75	2.75	83.87	16.13
0.31	0.50	0.46	1.14	21.33	78.67
1.25	0.91	0.91	0.91	27.72	72.28
5	0.83	0.83	0.83	25.41	74.59

****

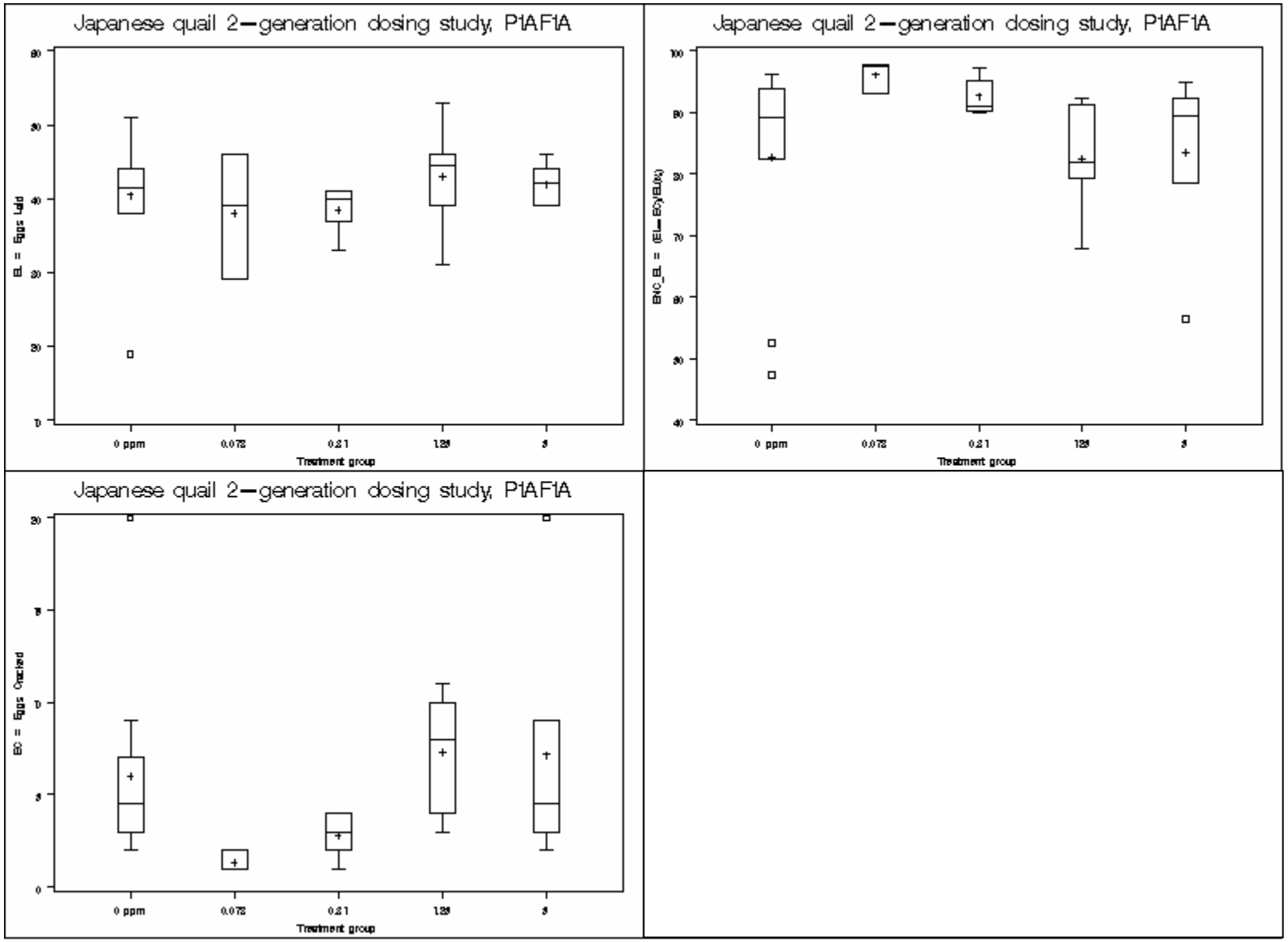
NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

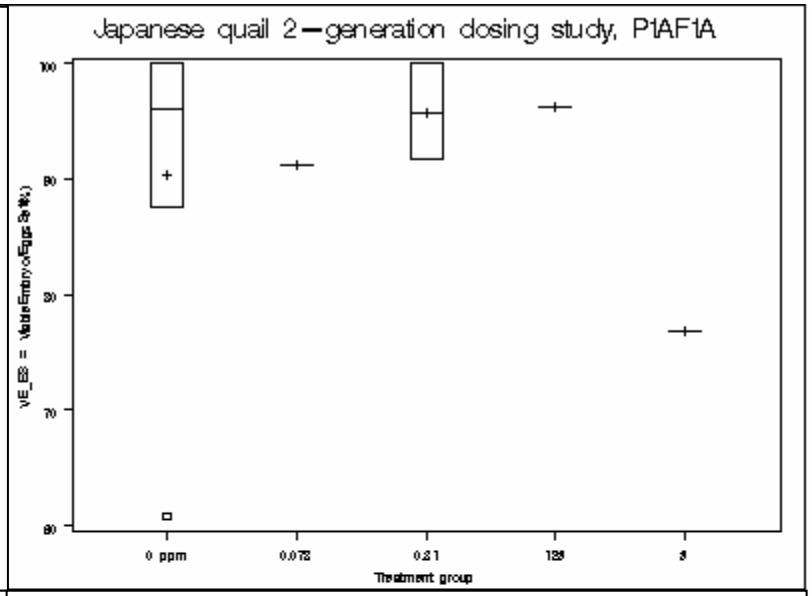
Degrees of Freedom	TestStat	P-value
4	2.63	0.621

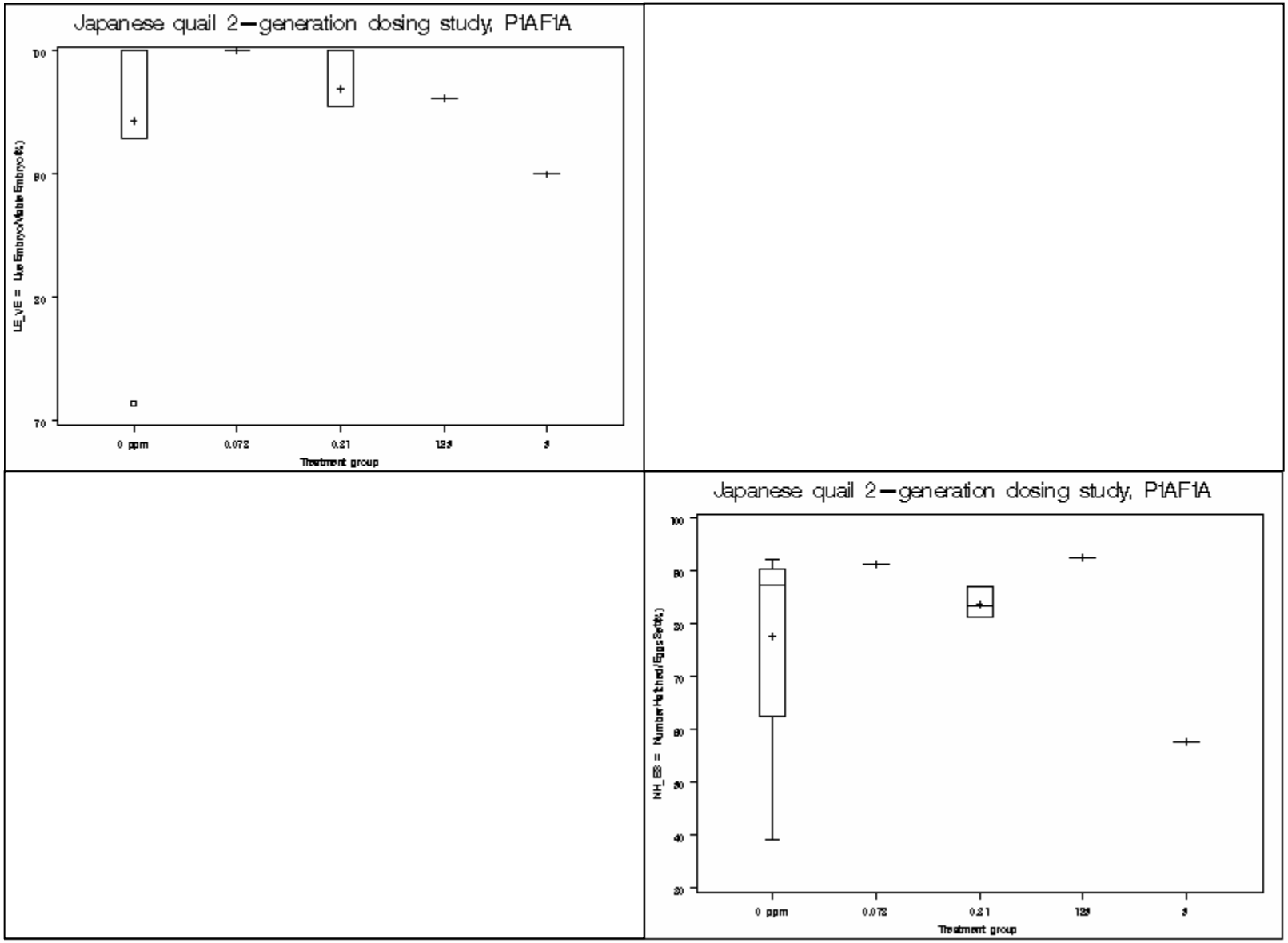
MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

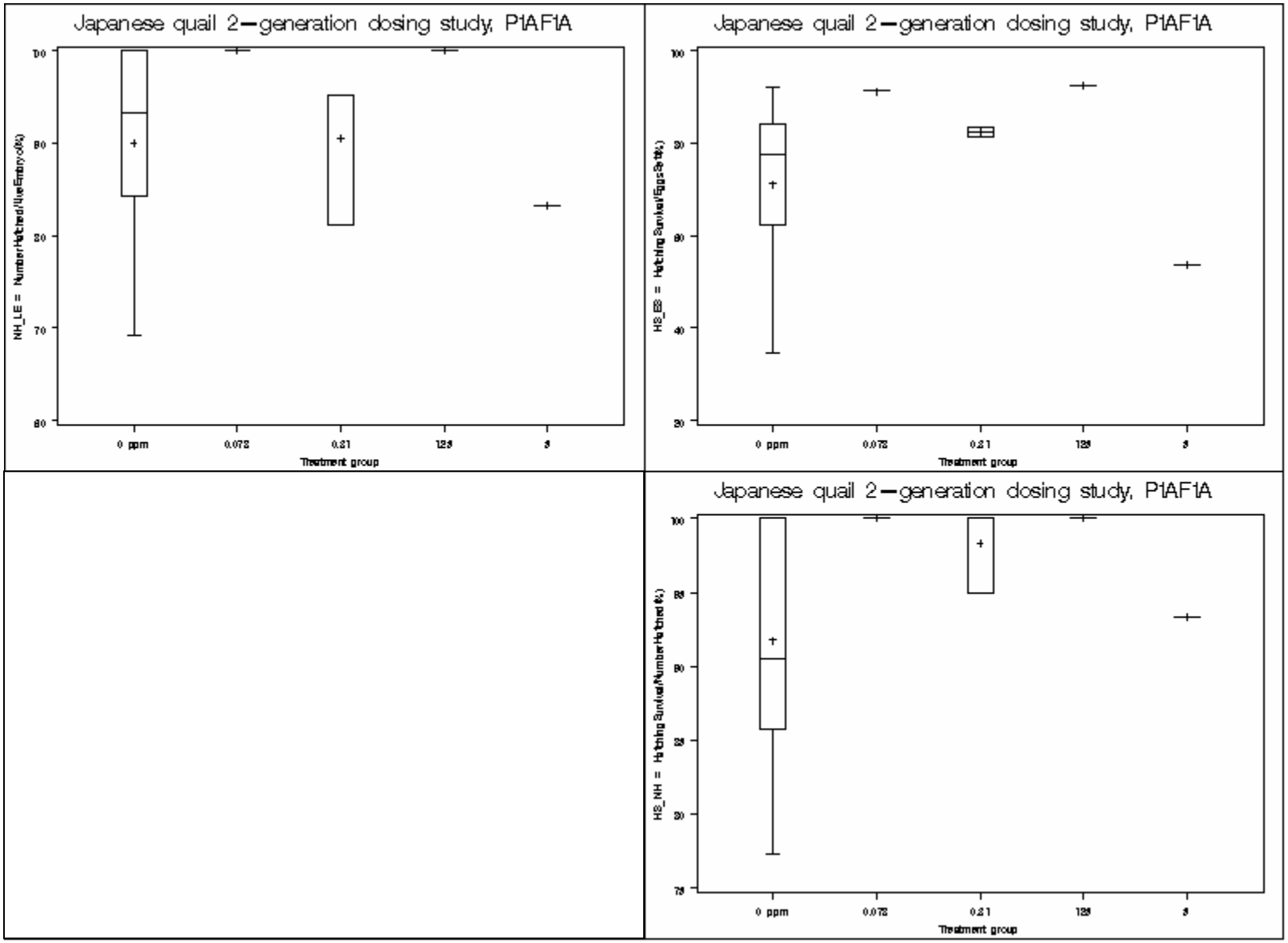
Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	1.10	.	.
0.078	2.75	1.000	0.744
0.31	0.50	0.771	0.203
1.25	0.91	1.000	0.218
5	0.83	1.000	0.173

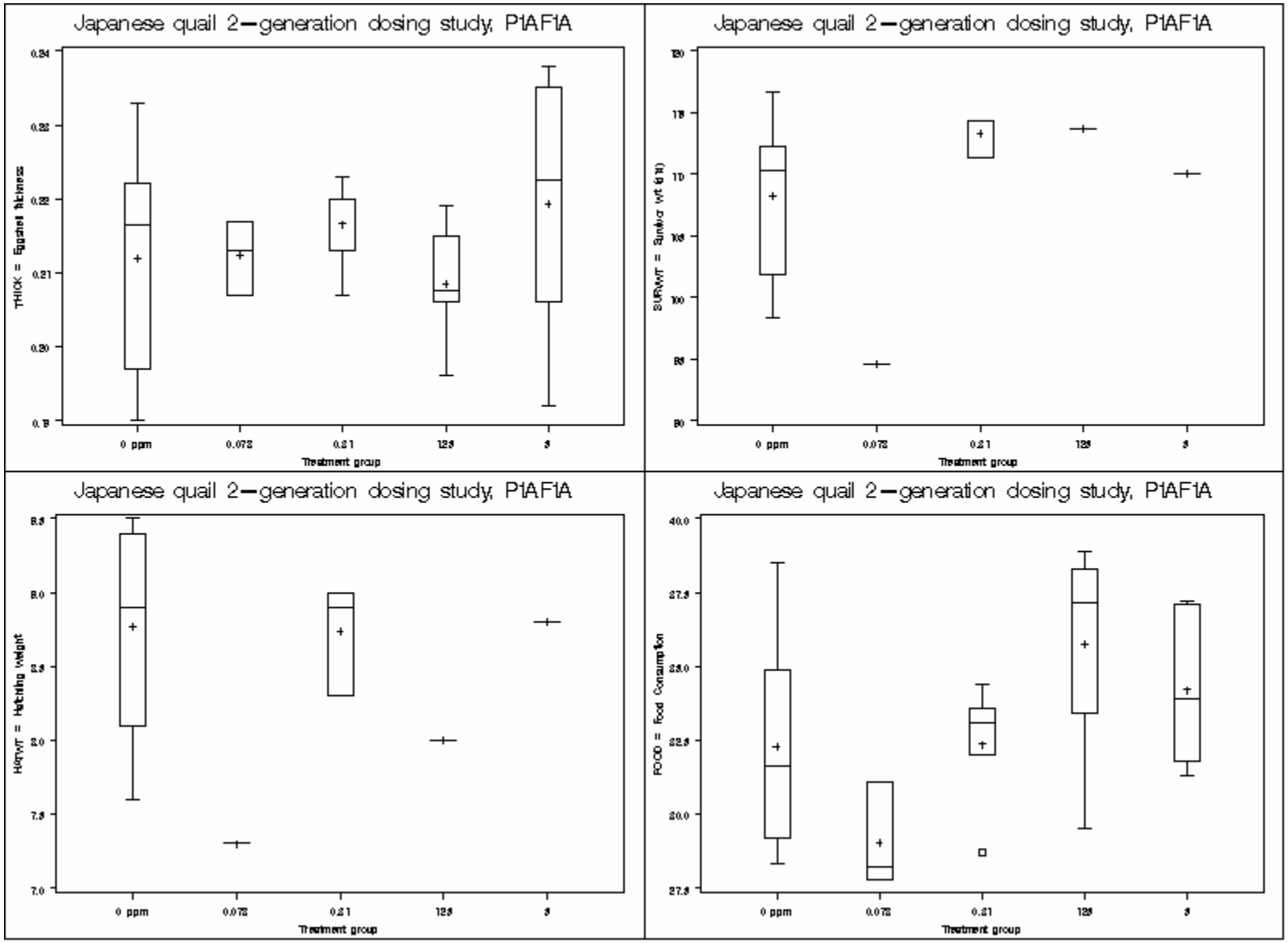
SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

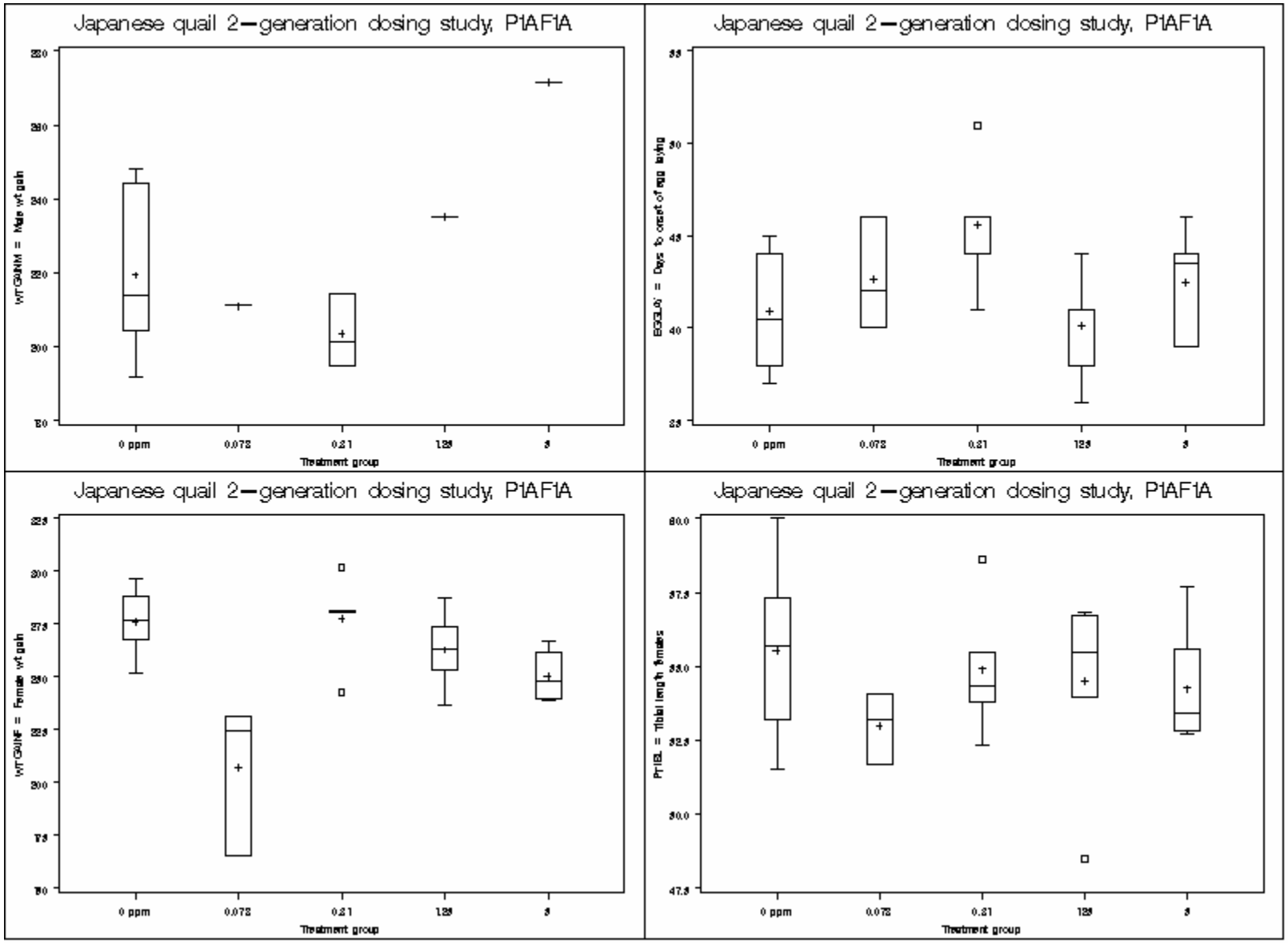

Japanese quail 2−generation dosing study, P1AF1A
EL = Eggs Laid
0 ppm
0.072
0.21
1.28
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
ENC_EL = (EL− EC)/EL(%)
0 ppm
0.072
0.21
1.28
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
EC = Eggs Cracked
0 ppm
0.072
0.21
1.28
5
Treatment group

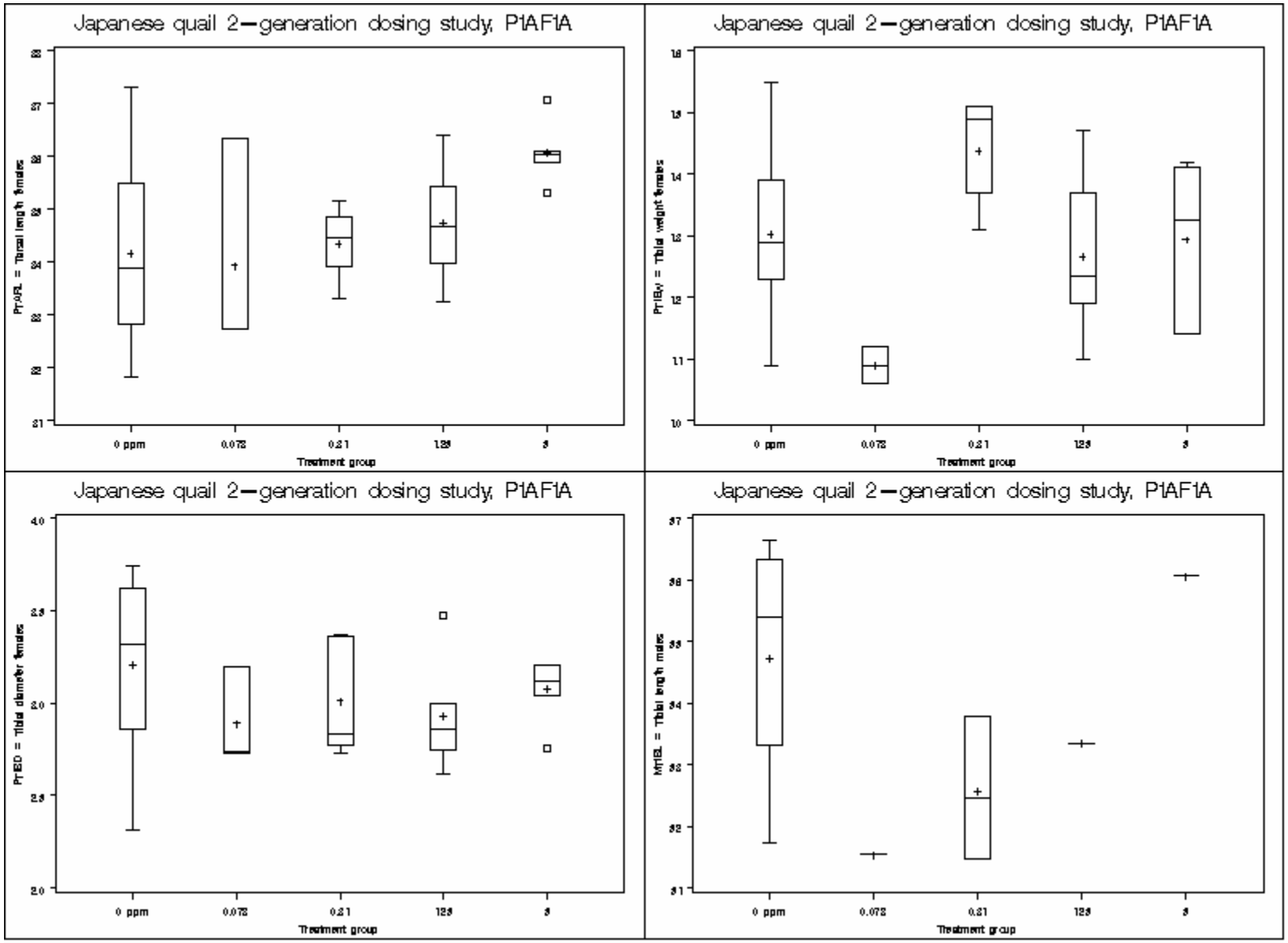

Japanese quail 2−generation dosing study, P1AF1A
100
90
80
70
60
0 ppm
0.073
0.21
128
Treatment group

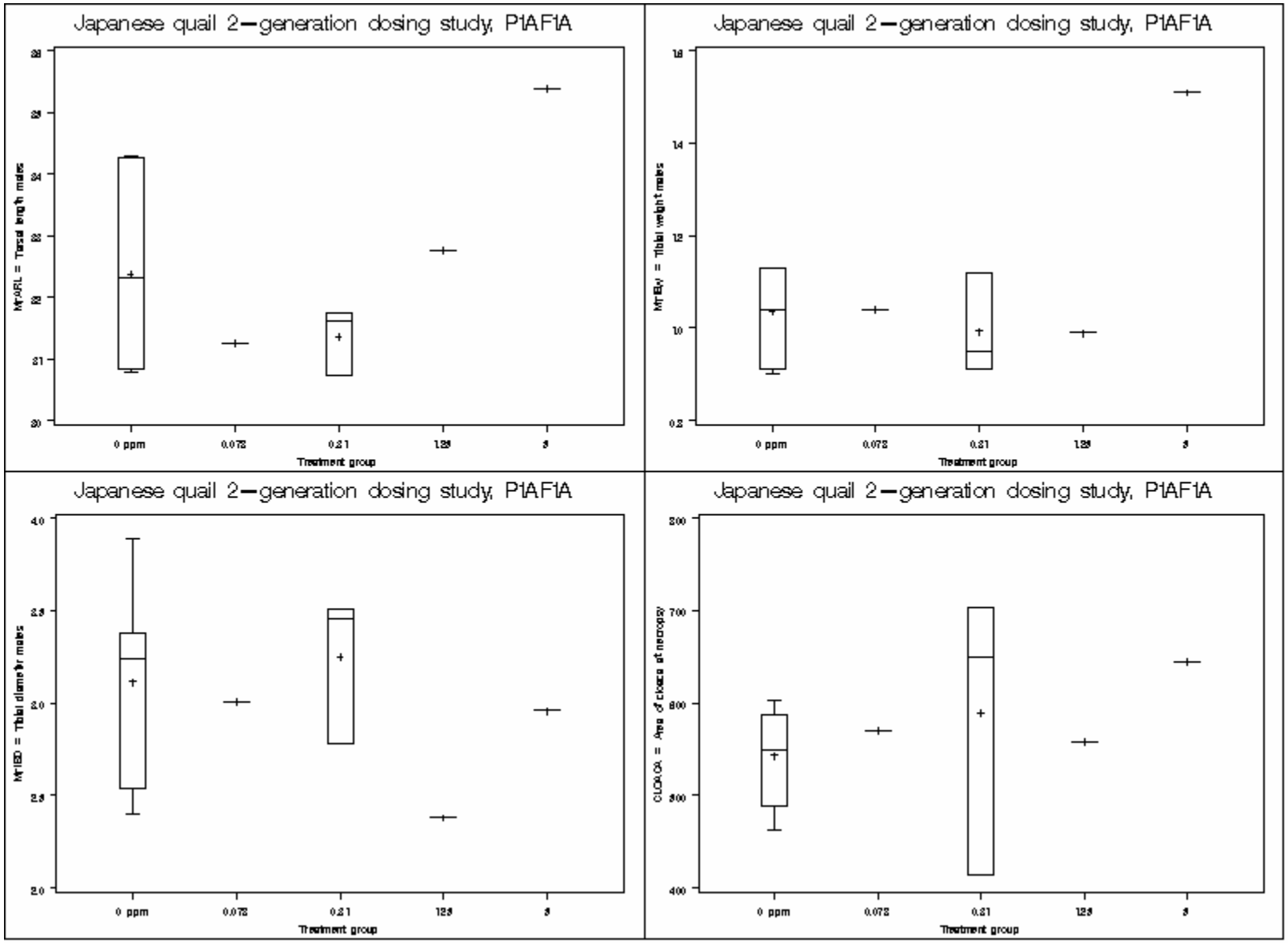

Japanese quail 2−generation dosing study, P1AF1A
100
90
80
70
LE_VE = Live Embryo/Viable Embryo(%)
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
100
90
80
70
60
50
40
30
NH_EG = Number Hatched/Eggs Set(%)
0 ppm
0.073
0.21
125
5
Treatment group

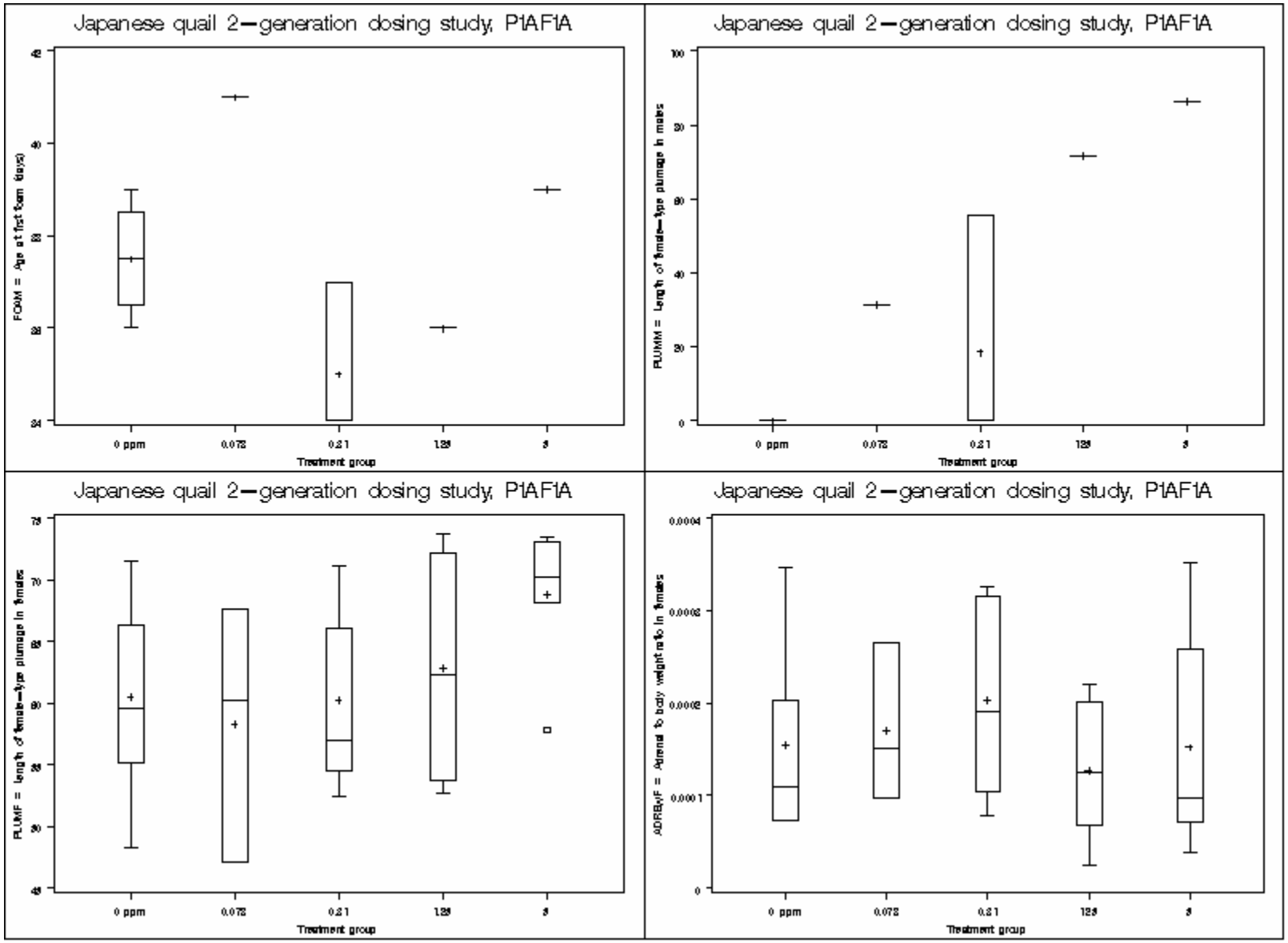

Japanese quail 2−generation dosing study, P1AF1A
NH_LE = Number Hatched/(Live Embryo)(%)
100
90
80
70
60
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
HS_EB = Hatching Survival/Eggs Set(%)
100
90
80
70
60
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
HS_NH = Hatching Survival/Number Hatched(%)
100
90
80
70
60
0 ppm
0.073
0.21
128
5
Treatment group

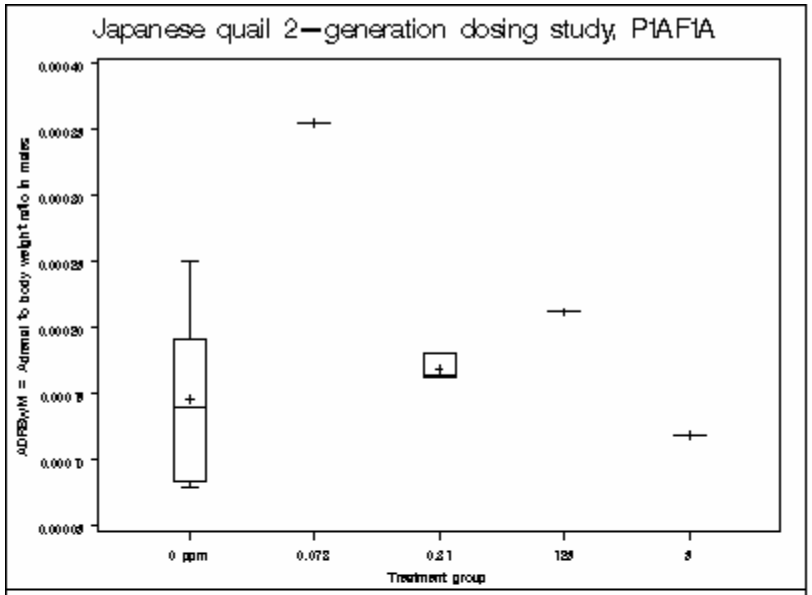

Japanese quail 2−generation dosing study, P1AF1A
THICK = Eggshell thickness
0.24
0.22
0.21
0.20
0.19
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
SURVWT = Survivor wt (g)
120
110
100
90
80
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
HATWT = Hatching weight
8.5
8.0
7.5
7.0
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
FOOD = Food Consumption
40.0
37.5
35.0
32.5
30.0
27.5
0 ppm
0.073
0.21
125
5
Treatment group

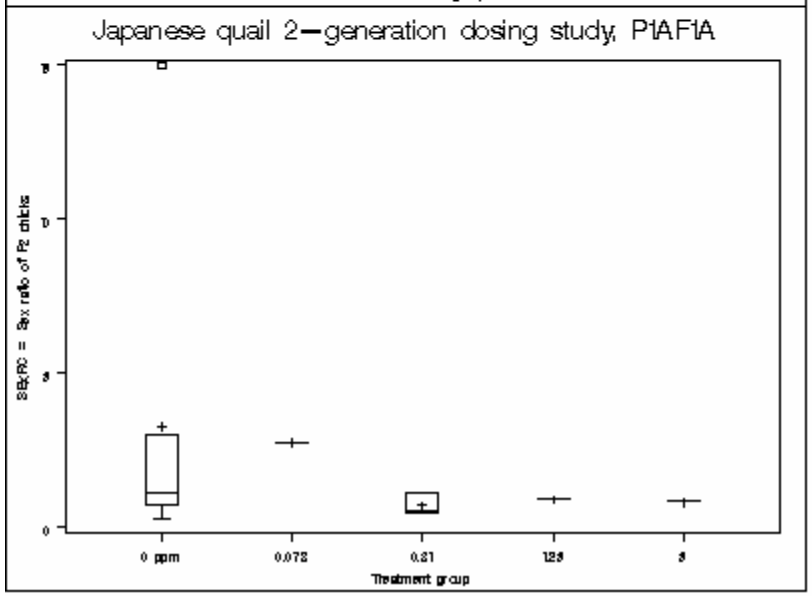

Japanese quail 2−generation dosing study, P1AF1A
WTGAINM = Male wt gain
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
EGGLAY = Days to onset of egg laying
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
WTGAINF = Female wt gain
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
TIBIAL = Tibial length females
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1AF1A
PrTarL = Tarsal length females
Treatment group
0 ppm
0.073
0.21
1.25
5
Japanese quail 2−generation dosing study, P1AF1A
PrTibWt = Tibial weight females
Treatment group
0 ppm
0.073
0.21
1.25
5
Japanese quail 2−generation dosing study, P1AF1A
PrTibD = Tibial diameter females
Treatment group
0 ppm
0.073
0.21
1.25
5
Japanese quail 2−generation dosing study, P1AF1A
MrTibL = Tibial length males
Treatment group
0 ppm
0.073
0.21
1.25
5


Japanese quail 2−generation dosing study, P1AF1A
MrTARL = Tarsal length males
Treatment group
0 ppm
0.072
0.21
1.25
5
Japanese quail 2−generation dosing study, P1AF1A
MrTBW = Tibial weight males
Treatment group
0 ppm
0.072
0.21
1.25
5
Japanese quail 2−generation dosing study, P1AF1A
MrTIBD = Tibial diameter males
Treatment group
0 ppm
0.072
0.21
1.25
5
Japanese quail 2−generation dosing study, P1AF1A
CLOACA = Area of cloaca at necropsy
Treatment group
0 ppm
0.072
0.21
1.25
5


Japanese quail 2−generation dosing study, P1AF1A
FOAM = Age at first foam (days)
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
PLUMM = Length of female−type plumage in males
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
PLUMF = Length of female−type plumage in females
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1A
ADRBxyF = Adrenal to body weight ratio in females
0.0004
0.0003
0.0002
0.0001
0
0 ppm
0.072
0.21
128
5
Treatment group


Japanese quail 2−generation dosing study, P1AF1A
ADRBxyM = Adrenal to body weight ratio in males
0.00040
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1AF1A
SExRC = Sex ratio of F2 chicks
1
0.5
0
0 ppm
0.072
0.21
125
5
Treatment group

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE EL (Eggs Laid)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.924	0.021	0.713	0.589	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	40.50	8.62	2.73	21.28	34.33, 46.67
0.078	7	45.71	5.41	2.04	11.83	40.71, 50.72
0.31	3	47.00	8.54	4.93	18.18	25.78, 68.22
1.25	8	35.88	9.05	3.20	25.22	28.31, 43.44
5	6	43.33	4.18	1.71	9.64	38.95, 47.72

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	41.50	19.00	51.00	.	.
0.078	46.00	35.00	51.00	112.87	-12.87
0.31	46.00	39.00	56.00	116.05	-16.05
1.25	39.00	20.00	46.00	88.58	11.42
5	41.50	40.00	49.00	107.00	-7.00

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	2.19	0.095

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	40.50	.	43.30	.	0.631	0.688	0.698	0.948	.
0.078	45.71	0.997	43.30	0.849	.	0.999	0.114	0.979	.
0.31	47.00	0.995	43.30	0.827	.	.	0.216	0.958	.
1.25	35.88	0.289	39.07	0.455	.	.	.	0.376	.
5	43.33	0.972	39.07	0.479	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE NEG_EC (Eggs Cracked)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.865	<.001	1.695	0.178	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	6.00	5.40	1.71	89.92	2.14, 9.86
0.078	7	5.29	4.64	1.76	87.87	0.99, 9.58
0.31	3	6.00	2.00	1.15	33.33	1.03, 10.97
1.25	8	10.38	7.17	2.54	69.11	4.38, 16.37
5	6	5.00	3.41	1.39	68.12	1.43, 8.57

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	4.50	2.00	20.00	.	.
0.078	4.00	2.00	15.00	88.10	11.90
0.31	6.00	4.00	8.00	100.00	0.00
1.25	7.00	3.00	21.00	172.92	-72.92
5	4.00	1.00	10.00	83.33	16.67

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.05	0.283

MannWhit(Bon) - testing each trt median signif. greater than control
Jonckheere - test assumes dose-response relationship, testing positive trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	4.50	.	.
0.078	4.00	1.000	0.672
0.31	6.00	1.000	0.386
1.25	7.00	0.199	0.038
5	4.00	1.000	0.195

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE ENC_EL ((EL-EC)/EL (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.893	0.003	2.127	0.103	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	82.67	17.72	5.60	21.44	69.99, 95.34
0.078	7	88.44	10.47	3.96	11.83	78.77, 98.12
0.31	3	87.21	3.99	2.31	4.58	77.29, 97.13
1.25	8	70.44	18.07	6.39	25.65	55.33, 85.54
5	6	88.81	7.09	2.90	7.99	81.36, 96.26

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	89.06	47.37	96.08	.	.
0.078	91.11	65.91	95.92	106.99	-6.99
0.31	89.29	82.61	89.74	105.50	-5.50
1.25	73.46	46.15	92.31	85.21	14.79
5	91.15	79.17	97.50	107.43	-7.43

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	7.28	0.122

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	89.06	.	.
0.078	91.11	1.000	0.721
0.31	89.29	1.000	0.543
1.25	73.46	0.172	0.030
5	91.15	1.000	0.227

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
ANALYSIS RESULTS FOR VARIABLE VE_ES (ViableEmbryo/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.741	<.001	3.239	0.032	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	90.42	13.78	5.21	15.24	77.67, 100.00
0.078	7	91.22	7.04	2.66	7.71	84.72, 97.73
0.31	3	89.66	11.68	6.74	13.03	60.64, 100.00
1.25	5	76.36	43.41	19.41	56.84	22.46, 100.00
5	4	88.49	8.78	4.39	9.93	74.51, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	96.15	60.87	100.00	.	.
0.078	93.33	77.78	96.88	100.89	-0.89
0.31	95.83	76.19	96.97	99.16	0.84
1.25	100.00	0.00	100.00	84.45	15.55
5	88.83	80.00	96.30	97.86	2.14

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.40	0.845

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	96.15	.	.
0.078	93.33	1.000	0.304
0.31	95.83	1.000	0.360
1.25	100.00	1.000	0.605
5	88.83	0.828	0.383

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
ANALYSIS RESULTS FOR VARIABLE LE_VE (LiveEmbryo/ViableEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.851	0.002	1.658	0.199	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	94.33	10.47	3.96	11.10	84.64, 100.00
0.078	7	95.46	4.85	1.83	5.08	90.98, 99.94
0.31	3	95.02	4.48	2.59	4.72	83.88, 100.00
1.25	4	100.00	0.00	0.00	0.00	. , .
5	4	89.05	10.46	5.23	11.74	72.41, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	100.00	71.43	100.00	.	.
0.078	96.77	89.29	100.00	101.20	-1.20
0.31	93.75	91.30	100.00	100.73	-0.73
1.25	100.00	100.00	100.00	106.01	-6.01
5	90.60	75.00	100.00	94.41	5.59

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	5.57	0.233

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	100.00	.	.
0.078	96.77	1.000	0.316
0.31	93.75	1.000	0.285
1.25	100.00	1.000	0.801
5	90.60	0.602	0.339

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE NH_ES (NumberHatched/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.877	0.005	1.378	0.275	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	77.71	19.73	7.46	25.39	59.46, 95.96
0.078	7	78.12	12.67	4.79	16.22	66.40, 89.85
0.31	3	78.95	23.49	13.56	29.76	20.59, 100.00
1.25	5	70.45	41.16	18.41	58.42	19.35, 100.00
5	4	71.90	15.16	7.58	21.08	47.79, 96.02

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	87.50	39.13	92.31	.	.
0.078	76.19	59.26	96.77	100.53	-0.53
0.31	87.50	52.38	96.97	101.60	-1.60
1.25	77.27	0.00	100.00	90.66	9.34
5	72.56	55.00	87.50	92.53	7.47

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.15	0.886

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	87.50	.	.
0.078	76.19	1.000	0.304
0.31	87.50	1.000	0.464
1.25	77.27	1.000	0.582
5	72.56	0.732	0.341

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE NH_LE (NumberHatched/LiveEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.900	0.018	2.343	0.090	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	90.03	10.88	4.11	12.08	79.97, 100.00
0.078	7	89.25	6.87	2.60	7.69	82.90, 95.60
0.31	3	91.11	15.40	8.89	16.90	52.87, 100.00
1.25	4	92.36	11.87	5.93	12.85	73.48, 100.00
5	4	90.53	2.03	1.02	2.24	87.30, 93.76

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	93.33	69.23	100.00	.	.
0.078	90.91	80.00	100.00	99.13	0.87
0.31	100.00	73.33	100.00	101.20	-1.20
1.25	97.22	75.00	100.00	102.59	-2.59
5	91.49	87.50	91.67	100.56	-0.56

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.07	0.990

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	90.03	.	90.40	.	1.000	1.000	0.995	1.000	.
0.078	89.25	0.788	90.40	0.613	.	0.999	0.986	1.000	.
0.31	91.11	0.881	90.40	0.641	.	.	1.000	1.000	.
1.25	92.36	0.927	90.40	0.662	.	.	.	0.999	.
5	90.53	0.861	90.40	0.674	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE HS_ES (HatchlingSurvival/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.896	0.013	1.411	0.265	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	71.20	18.84	7.12	26.46	53.78, 88.62
0.078	7	76.15	13.11	4.96	17.22	64.02, 88.28
0.31	3	69.97	23.88	13.79	34.13	10.65, 100.00
1.25	5	70.45	41.16	18.41	58.42	19.35, 100.00
5	4	66.51	14.32	7.16	21.52	43.73, 89.29

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	77.42	34.78	92.31	.	.
0.078	76.19	59.26	96.77	106.96	-6.96
0.31	79.17	42.86	87.88	98.27	1.73
1.25	77.27	0.00	100.00	98.96	1.04
5	68.43	50.00	79.17	93.41	6.59

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	21	0.12	0.974

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	71.20	.	73.67	.	0.995	1.000	1.000	0.998	.
0.078	76.15	0.926	73.67	0.664	.	0.995	0.993	0.964	.
0.31	69.97	0.810	70.27	0.593	.	.	1.000	1.000	.
1.25	70.45	0.817	70.27	0.607	.	.	.	0.999	.
5	66.51	0.720	66.51	0.503	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE HS_NH (HatchlingSurvival/NumberHatched (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.927	0.075	5.259	0.005	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	91.76	8.76	3.31	9.54	83.67, 99.86
0.078	7	97.45	4.37	1.65	4.48	93.41, 100.00
0.31	3	87.64	5.04	2.91	5.75	75.11, 100.00
1.25	4	100.00	0.00	0.00	0.00	. , .
5	4	92.42	2.27	1.14	2.46	88.81, 96.04

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	90.48	77.27	100.00	.	.
0.078	100.00	90.48	100.00	106.19	-6.19
0.31	90.48	81.82	90.63	95.51	4.49
1.25	100.00	100.00	100.00	108.97	-8.97
5	91.88	90.48	95.45	100.72	-0.72

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	9.98	0.041

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	90.48	.	.
0.078	100.00	1.000	0.932
0.31	90.48	1.000	0.481
1.25	100.00	1.000	0.891
5	91.88	1.000	0.640

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE THICK (Eggshell thickness)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.974	0.568	0.897	0.479	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	0.21	0.02	0.00	7.31	0.20, 0.22
0.078	7	0.21	0.01	0.00	5.57	0.20, 0.22
0.31	3	0.20	0.02	0.01	9.44	0.16, 0.25
1.25	8	0.20	0.01	0.00	6.27	0.19, 0.21
5	6	0.21	0.01	0.00	5.72	0.20, 0.23

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.22	0.19	0.23	.	.
0.078	0.21	0.19	0.23	100.54	-0.54
0.31	0.19	0.19	0.23	95.75	4.25
1.25	0.20	0.17	0.21	92.98	7.02
5	0.21	0.20	0.23	100.86	-0.86

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	2.04	0.114

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.21	.	0.21	.	1.000	0.859	0.186	0.999	.
0.078	0.21	0.888	0.21	0.612	.	0.824	0.196	1.000	.
0.31	0.20	0.421	0.20	0.250	.	.	0.970	0.802	.
1.25	0.20	0.053	0.20	0.155	.	.	.	0.196	.
5	0.21	0.908	0.20	0.185	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE HATWT (Hatchling Weight)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.970	0.656	0.547	0.703	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	8.77	0.69	0.26	7.89	8.13, 9.41
0.078	7	8.68	0.51	0.19	5.88	8.21, 9.15
0.31	3	8.00	0.62	0.36	7.73	6.46, 9.54
1.25	4	8.91	0.69	0.35	7.79	7.80, 10.01
5	4	9.06	1.04	0.52	11.50	7.40, 10.72

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	8.90	7.60	9.50	.	.
0.078	8.82	7.67	9.16	98.93	1.07
0.31	7.71	7.58	8.71	91.21	8.79
1.25	9.07	7.93	9.57	101.55	-1.55
5	8.76	8.20	10.53	103.32	-3.32

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	1.11	0.380

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	8.77	.	8.77	.	0.999	0.521	0.998	0.963	.
0.078	8.68	0.751	8.70	0.503	.	0.638	0.984	0.903	.
0.31	8.00	0.189	8.70	0.554	.	.	0.463	0.312	.
1.25	8.91	0.913	8.70	0.565	.	.	.	0.998	.
5	9.06	0.963	8.70	0.576	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE SURVWT (Survivor Wt (d14))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.951	0.262	2.525	0.073	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	108.20	6.43	2.43	5.95	102.25, 114.15
0.078	7	112.71	6.08	2.30	5.39	107.09, 118.33
0.31	3	106.34	0.67	0.39	0.63	104.67, 108.01
1.25	4	109.70	11.50	5.75	10.48	91.40, 128.00
5	4	113.32	6.25	3.13	5.52	103.37, 123.27

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	110.30	98.30	116.70	.	.
0.078	115.45	104.20	118.59	104.17	-4.17
0.31	106.10	105.82	107.10	98.28	1.72
1.25	113.19	93.05	119.38	101.39	-1.39
5	112.25	107.96	120.82	104.73	-4.73

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.79	0.543

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	108.20	.	110.46	.	0.750	0.995	0.997	0.771	.
0.078	112.71	0.992	110.46	0.806	.	0.685	0.958	1.000	.
0.31	106.34	0.696	110.10	0.772	.	.	0.969	0.693	.
1.25	109.70	0.919	110.10	0.803	.	.	.	0.947	.
5	113.32	0.991	110.10	0.814	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE FOOD (Food Consumption)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.941	0.036	3.321	0.021	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	32.27	3.60	1.14	11.16	29.69, 34.85
0.078	8	29.59	1.23	0.44	4.16	28.56, 30.62
0.31	8	26.18	3.99	1.41	15.26	22.84, 29.51
1.25	8	34.31	4.51	1.59	13.13	30.55, 38.08
5	6	33.07	3.80	1.55	11.49	29.08, 37.05

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	31.65	28.30	38.50	.	.
0.078	29.35	28.20	31.60	91.69	8.31
0.31	25.15	21.90	31.80	81.11	18.89
1.25	32.80	28.90	39.80	106.33	-6.33
5	32.20	27.80	38.50	102.47	-2.47

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	15.36	0.004

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	31.65	.	.
0.078	29.35	0.219	0.041
0.31	25.15	0.047	0.002
1.25	32.80	1.000	0.531
5	32.20	1.000	0.795

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	0.078	0.31
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINM (Male wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.907	0.009	0.026	0.999	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	219.43	20.39	7.71	9.29	200.57, 238.29
0.078	8	223.40	18.61	6.58	8.33	207.84, 238.96
0.31	8	211.18	27.14	9.59	12.85	188.49, 233.86
1.25	5	223.52	21.77	9.74	9.74	196.49, 250.55
5	4	219.03	21.69	10.85	9.90	184.51, 253.54

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	213.70	191.60	248.10	.	.
0.078	222.40	202.40	249.70	101.81	-1.81
0.31	205.85	190.80	275.50	96.24	3.76
1.25	215.40	196.30	247.40	101.86	-1.86
5	211.45	202.80	250.40	99.82	0.18

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.45	0.485

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	213.70	.	.
0.078	222.40	1.000	0.500
0.31	205.85	0.489	0.079
1.25	215.40	1.000	0.363
5	211.45	1.000	0.447

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINF (Female wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.967	0.386	1.609	0.199	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	276.05	14.44	4.57	5.23	265.72, 286.38
0.078	7	268.79	12.62	4.77	4.69	257.12, 280.45
0.31	3	260.93	36.36	20.99	13.93	170.61, 351.25
1.25	8	295.58	25.79	9.12	8.72	274.02, 317.13
5	6	274.53	28.18	11.51	10.27	244.96, 304.11

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	276.90	251.50	296.10	.	.
0.078	262.00	258.70	287.00	97.37	2.63
0.31	253.60	228.80	300.40	94.52	5.48
1.25	287.45	275.10	350.90	107.07	-7.07
5	279.45	231.80	313.00	99.45	0.55

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	2.08	0.109

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	276.05	.	278.19	.	0.962	0.834	0.357	1.000	.
0.078	268.79	0.572	278.19	0.665	.	0.985	0.159	0.990	.
0.31	260.93	0.396	278.19	0.680	.	.	0.167	0.905	.
1.25	295.58	0.999	278.19	0.722	.	.	.	0.411	.
5	274.53	0.800	274.53	0.588	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE EGGLAY (Days to onset of egg laying)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.941	0.067	0.926	0.463	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	40.90	3.14	0.99	7.68	38.65, 43.15
0.078	7	37.86	3.02	1.14	7.99	35.06, 40.65
0.31	3	38.00	4.36	2.52	11.47	27.17, 48.83
1.25	8	43.75	4.27	1.51	9.76	40.18, 47.32
5	6	40.33	4.59	1.87	11.38	35.52, 45.15

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	40.50	37.00	45.00	.	.
0.078	38.00	33.00	42.00	92.56	7.44
0.31	40.00	33.00	41.00	92.91	7.09
1.25	43.00	39.00	50.00	106.97	-6.97
5	38.50	35.00	46.00	98.61	1.39

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	2.69	0.051

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	40.90	.	40.90	.	0.489	0.771	0.516	0.998	.
0.078	37.86	0.173	40.50	0.491	.	1.000	0.039	0.764	.
0.31	38.00	0.341	40.50	0.546	.	.	0.192	0.905	.
1.25	43.75	0.998	40.50	0.536	.	.	.	0.465	.
5	40.33	0.741	40.33	0.515	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBL (Tibial length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.975	0.600	3.774	0.014	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	55.53	2.67	0.84	4.81	53.62, 57.44
0.078	7	55.43	1.61	0.61	2.91	53.94, 56.92
0.31	3	50.08	5.10	2.94	10.18	37.42, 62.74
1.25	8	56.93	1.33	0.47	2.34	55.81, 58.04
5	6	55.04	2.16	0.88	3.92	52.78, 57.31

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	55.68	51.52	60.00	.	.
0.078	55.47	52.51	57.10	99.82	0.18
0.31	51.89	44.33	54.03	90.18	9.82
1.25	56.46	55.33	59.34	102.50	-2.50
5	55.70	51.17	56.78	99.12	0.88

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	8.50	0.075

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	55.68	.	.
0.078	55.47	1.000	0.423
0.31	51.89	0.269	0.061
1.25	56.46	1.000	0.779
5	55.70	1.000	0.585

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE FTARL (Tarsal length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.977	0.680	0.570	0.686	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	34.16	1.79	0.57	5.25	32.88, 35.45
0.078	7	36.10	2.49	0.94	6.89	33.80, 38.41
0.31	3	33.44	2.41	1.39	7.20	27.46, 39.42
1.25	8	35.27	2.92	1.03	8.29	32.83, 37.72
5	6	33.06	2.91	1.19	8.79	30.01, 36.11

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	33.90	31.82	37.30	.	.
0.078	36.67	31.67	38.88	105.68	-5.68
0.31	33.55	30.98	35.79	97.88	2.12
1.25	35.74	30.49	39.52	103.25	-3.25
5	32.98	28.80	37.15	96.78	3.22

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	1.59	0.202

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	34.16	.	34.96	.	0.521	0.992	0.879	0.910	.
0.078	36.10	0.998	34.96	0.822	.	0.539	0.966	0.210	.
0.31	33.44	0.677	34.77	0.765	.	.	0.811	1.000	.
1.25	35.27	0.985	34.77	0.830	.	.	.	0.483	.
5	33.06	0.482	33.06	0.270	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBD (Tibial diameter of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.968	0.399	2.239	0.089	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	3.21	0.47	0.15	14.71	2.87, 3.54
0.078	7	3.08	0.28	0.11	9.17	2.82, 3.34
0.31	3	3.25	0.15	0.09	4.70	2.87, 3.63
1.25	8	3.19	0.23	0.08	7.34	2.99, 3.39
5	6	3.35	0.39	0.16	11.56	2.95, 3.76

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.32	2.31	3.74	.	.
0.078	3.03	2.81	3.51	96.03	3.97
0.31	3.22	3.12	3.42	101.48	-1.48
1.25	3.16	2.79	3.50	99.50	0.50
5	3.24	2.98	3.88	104.54	-4.54

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	0.49	0.740

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.21	.	3.21	.	0.948	1.000	1.000	0.930	.

0.078	3.08	0.544	3.21	0.583	.	0.952	0.973	0.644	.
0.31	3.25	0.896	3.21	0.617	.	.	0.999	0.995	.
1.25	3.19	0.813	3.21	0.636	.	.	.	0.915	.
5	3.35	0.977	3.21	0.648	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBW (Tibial weight of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.979	0.733	0.932	0.459	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval	
0 ppm	10	1.30	0.13	0.04	10.23	1.21,	1.40
0.078	7	1.24	0.06	0.02	4.62	1.19,	1.29
0.31	3	1.16	0.14	0.08	12.44	0.80,	1.52
1.25	8	1.40	0.11	0.04	7.72	1.31,	1.49
5	6	1.26	0.16	0.07	12.87	1.09,	1.43

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.29	1.09	1.55	.	.
0.078	1.23	1.17	1.33	95.06	4.94
0.31	1.09	1.07	1.33	89.28	10.72
1.25	1.38	1.25	1.54	107.16	-7.16
5	1.26	1.01	1.51	96.83	3.17

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	2.72	0.049

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.30	.	1.30	.	0.821	0.430	0.506	0.965	.

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0.078	1.24	0.384	1.30	0.534	.	0.898	0.121	0.997	.
0.31	1.16	0.147	1.30	0.580	.	.	0.062	0.786	.
1.25	1.40	0.998	1.30	0.583	.	.	.	0.275	.
5	1.26	0.579	1.26	0.351	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B

16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBL (Tibial length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.969	0.460	0.806	0.532	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	54.73	1.89	0.71	3.44	52.98, 56.47
0.078	8	53.95	2.33	0.82	4.32	52.00, 55.90
0.31	8	53.50	2.67	0.94	4.99	51.26, 55.73
1.25	5	54.01	2.70	1.21	5.00	50.66, 57.37
5	4	54.98	1.25	0.63	2.28	52.99, 56.98

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	55.39	51.74	56.64	.	.
0.078	54.16	50.51	57.20	98.58	1.42
0.31	52.52	51.05	59.30	97.75	2.25
1.25	53.40	51.43	57.18	98.69	1.31
5	54.65	53.89	56.74	100.47	-0.47

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	27	0.42	0.792

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	54.73	.	54.73	.	0.964	0.838	0.983	1.000	.
0.078	53.95	0.547	53.98	0.321	.	0.995	1.000	0.947	.
0.31	53.50	0.376	53.98	0.343	.	.	0.995	0.828	.
1.25	54.01	0.604	53.98	0.386	.	.	.	0.969	.
5	54.98	0.864	53.98	0.411	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE MTARL (Tarsal length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.876	0.002	0.337	0.850	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	32.37	1.47	0.56	4.54	31.01, 33.73
0.078	8	32.10	2.09	0.74	6.50	30.35, 33.84
0.31	8	31.45	2.61	0.92	8.30	29.26, 33.63
1.25	5	31.48	1.73	0.77	5.49	29.33, 33.62
5	4	31.86	2.95	1.48	9.27	27.16, 36.56

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.32	30.79	34.29	.	.
0.078	31.02	30.67	36.70	99.15	0.85
0.31	31.12	28.45	37.34	97.14	2.86
1.25	31.00	29.46	33.95	97.24	2.76
5	30.75	29.78	36.15	98.41	1.59

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.90	0.574

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	32.32	.	.
0.078	31.02	0.929	0.209
0.31	31.12	0.280	0.060
1.25	31.00	0.702	0.070
5	30.75	0.830	0.063

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBD (Tibial diameter of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.970	0.502	1.444	0.247	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	3.12	0.51	0.19	16.28	2.65, 3.58
0.078	8	2.89	0.58	0.21	20.15	2.40, 3.38
0.31	8	3.12	0.48	0.17	15.48	2.71, 3.52
1.25	5	2.95	0.36	0.16	12.26	2.50, 3.40
5	4	2.74	0.20	0.10	7.11	2.43, 3.05

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.24	2.40	3.89	.	.
0.078	3.02	1.96	3.45	92.76	7.24
0.31	3.20	2.48	3.76	100.06	-0.06
1.25	2.96	2.57	3.52	94.75	5.25
5	2.78	2.48	2.93	88.02	11.98

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	27	0.63	0.649

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	3.12	.	3.12	.	0.890	1.000	0.976	0.726	.
0.078	2.89	0.429	3.00	0.390	.	0.874	0.999	0.986	.
0.31	3.12	0.816	3.00	0.416	.	.	0.973	0.706	.
1.25	2.95	0.579	2.95	0.373	.	.	.	0.965	.
5	2.74	0.289	2.74	0.149	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBW (Tibial weight of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.752	<.001	2.851	0.043	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	1.04	0.10	0.04	9.46	0.95, 1.13
0.078	8	1.07	0.08	0.03	7.43	1.00, 1.13
0.31	8	1.08	0.22	0.08	20.34	0.90, 1.27
1.25	5	1.21	0.39	0.18	32.36	0.72, 1.70
5	4	0.93	0.06	0.03	6.34	0.84, 1.03

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.04	0.90	1.13	.	.
0.078	1.04	0.99	1.18	102.83	-2.83
0.31	1.01	0.95	1.61	104.40	-4.40
1.25	1.09	0.94	1.90	116.83	-16.83
5	0.93	0.87	1.01	90.03	9.97

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	6.10	0.192

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	1.04	.	.
0.078	1.04	1.000	0.636
0.31	1.01	1.000	0.305
1.25	1.09	1.000	0.484
5	0.93	0.320	0.082

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE CLOACA (Cloacal area at necropsy (males))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.962	0.306	1.058	0.396	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	543.37	51.44	19.44	9.47	495.79, 590.95
0.078	8	513.49	41.98	14.84	8.18	478.39, 548.59
0.31	8	490.72	95.46	33.75	19.45	410.91, 570.53
1.25	5	536.78	90.75	40.59	16.91	424.10, 649.46
5	4	459.84	52.91	26.45	11.51	375.65, 544.03

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	549.11	463.39	602.98	.	.
0.078	526.68	413.23	544.84	94.50	5.50
0.31	497.87	327.96	635.17	90.31	9.69
1.25	533.93	413.37	668.41	98.79	1.21
5	455.43	409.67	518.81	84.63	15.37

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	27	1.24	0.318

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	543.37	.	543.37	.	0.922	0.604	1.000	0.343	.
0.078	513.49	0.470	513.49	0.250	.	0.966	0.977	0.725	.
0.31	490.72	0.218	508.43	0.220	.	.	0.779	0.951	.
1.25	536.78	0.758	508.43	0.267	.	.	.	0.491	.
5	459.84	0.104	459.84	0.043	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	1.25	5

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE FOAM (Age at first foam (days))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.947	0.155	0.627	0.648	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	4	37.50	1.29	0.65	3.44	35.45, 39.55
0.078	8	33.63	1.92	0.68	5.72	32.02, 35.23
0.31	8	34.25	2.12	0.75	6.19	32.48, 36.02
1.25	5	35.00	2.35	1.05	6.70	32.09, 37.91
5	4	35.25	2.22	1.11	6.29	31.72, 38.78

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	37.50	36.00	39.00	.	.
0.078	33.00	32.00	38.00	89.67	10.33
0.31	33.50	32.00	38.00	91.33	8.67
1.25	36.00	32.00	37.00	93.33	6.67
5	35.00	33.00	38.00	94.00	6.00

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	24	2.64	0.059

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	37.50	.	37.50	.	0.035	0.100	0.378	0.532	.
0.078	33.63	0.008	34.36	0.011	.	0.971	0.759	0.690	.
0.31	34.25	0.023	34.36	0.011	.	.	0.965	0.927	.
1.25	35.00	0.106	34.36	0.018	.	.	.	1.000	.
5	35.25	0.165	34.36	0.024	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	<lowest dose	0.078
Williams	<lowest dose	0.078

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMF (Female-type plumage length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.977	0.674	2.240	0.089	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	60.55	7.11	2.25	11.75	55.46, 65.64
0.078	7	75.70	7.30	2.76	9.65	68.95, 82.46
0.31	3	68.38	16.22	9.37	23.72	28.08, 108.67
1.25	8	63.75	5.48	1.94	8.59	59.17, 68.33
5	6	69.16	7.39	3.02	10.69	61.40, 76.91

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	59.59	48.22	71.53	.	.
0.078	75.30	65.24	85.35	125.02	-25.02
0.31	73.35	50.25	81.53	112.92	-12.92
1.25	64.44	53.62	70.10	105.28	-5.28
5	71.00	58.18	77.09	114.21	-14.21

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	29	4.30	0.007

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	60.55	.	67.03	.	0.004	0.561	0.910	0.238	.
0.078	75.70	1.000	67.03	0.977	.	0.661	0.046	0.571	.
0.31	68.38	0.998	67.03	0.957	.	.	0.905	1.000	.
1.25	63.75	0.981	66.07	0.980	.	.	.	0.707	.
5	69.15	1.000	66.07	0.976	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMM (Female-type plumage length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.704	<.001	3.571	0.018	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	.	. , .
0.078	8	7.25	13.46	4.76	185.69	0.00, 18.51
0.31	8	4.81	13.59	4.80	282.84	0.00, 16.17
1.25	5	5.58	12.48	5.58	223.61	0.00, 21.08
5	4	11.87	23.73	11.87	200.00	0.00, 49.62

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	30.90	.	.
0.31	0.00	0.00	38.44	.	.
1.25	0.00	0.00	27.91	.	.
5	0.00	0.00	47.46	.	.

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	2.12	0.713

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.915
0.31	0.00	1.000	0.765
1.25	0.00	1.000	0.772
5	0.00	1.000	0.842

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWF (Adrenal to Body Weight ratio in female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.908	0.007	0.625	0.648	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	10	0.00	0.00	0.00	63.85	0.00, 0.00
0.078	8	0.00	0.00	0.00	45.39	0.00, 0.00
0.31	8	0.00	0.00	0.00	48.29	0.00, 0.00
1.25	5	0.00	0.00	0.00	43.63	0.00, 0.00
5	4	0.00	0.00	0.00	36.46	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	118.21	-18.21
0.31	0.00	0.00	0.00	108.86	-8.86
1.25	0.00	0.00	0.00	154.06	-54.06
5	0.00	0.00	0.00	105.53	-5.53

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.54	0.471

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.836
0.31	0.00	1.000	0.760
1.25	0.00	1.000	0.944
5	0.00	1.000	0.901

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWM (Adrenal to Body Weight ratio in males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.969	0.490	3.957	0.012	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	41.52	0.00, 0.00
0.078	7	0.00	0.00	0.00	82.26	0.00, 0.00
0.31	3	0.00	0.00	0.00	38.36	0.00, 0.00
1.25	8	0.00	0.00	0.00	35.19	0.00, 0.00
5	6	0.00	0.00	0.00	61.41	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	96.40	3.60
0.31	0.00	0.00	0.00	107.93	-7.93
1.25	0.00	0.00	0.00	117.12	-17.12
5	0.00	0.00	0.00	97.55	2.45

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.12	0.891

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.375
0.31	0.00	1.000	0.554
1.25	0.00	1.000	0.790
5	0.00	1.000	0.603

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1AF1B
16:09 Wednesday, October 19, 2005
ANALYSIS RESULTS FOR VARIABLE SEXRC (Sex ratio of F2 chicks)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.640	<.001	1.873	0.157	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	3.28	5.25	1.98	160.09	0.00, 8.13
0.078	7	1.31	0.45	0.17	34.43	0.89, 1.73
0.31	3	1.83	1.02	0.59	55.85	0.00, 4.36
1.25	3	1.28	1.51	0.87	118.11	0.00, 5.02
5	4	1.96	1.46	0.73	74.82	0.00, 4.28

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.10	0.25	15.00	.	.
0.078	1.20	0.78	2.00	40.00	60.00
0.31	1.33	1.15	3.00	55.71	44.29
1.25	0.63	0.20	3.00	38.94	61.06
5	1.63	0.56	4.00	59.62	40.38

****

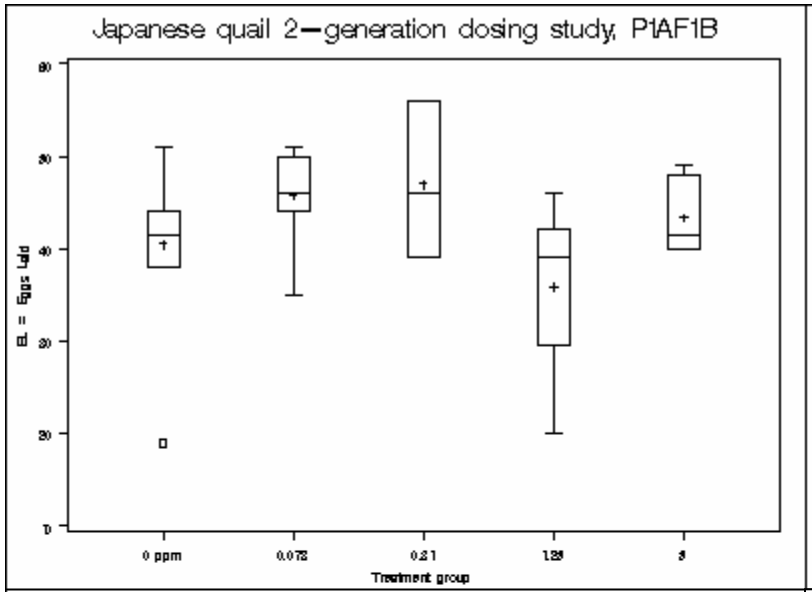
NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

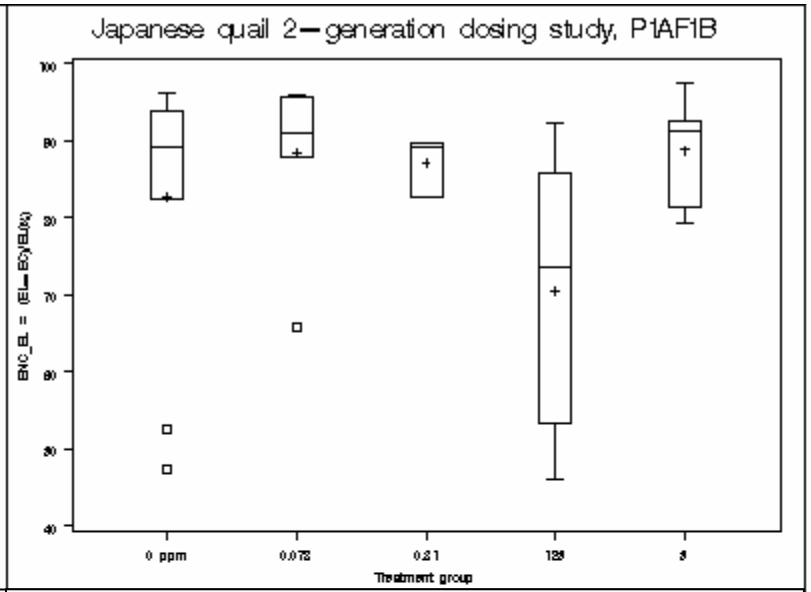
Degrees of Freedom	TestStat	P-value
4	1.53	0.821

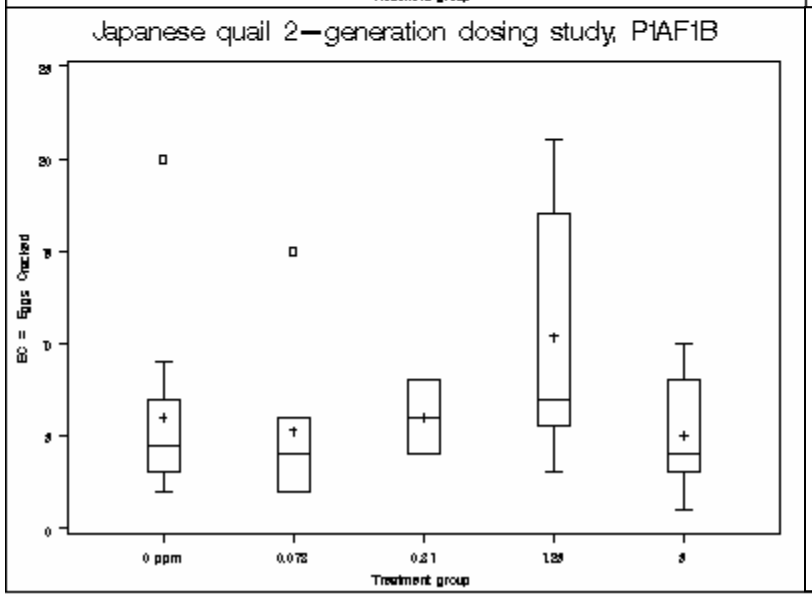
MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

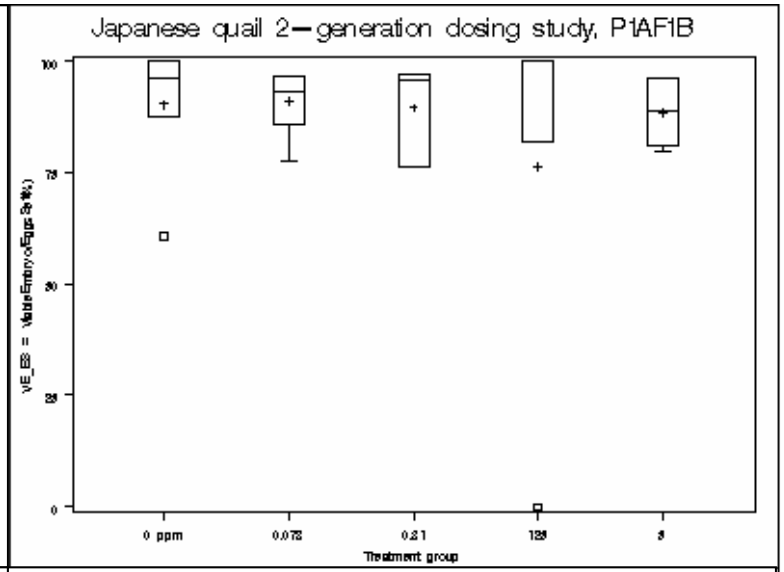
Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	1.10	.	.
0.078	1.20	1.000	0.500
0.31	1.33	1.000	0.720
1.25	0.63	0.888	0.418
5	1.63	1.000	0.581

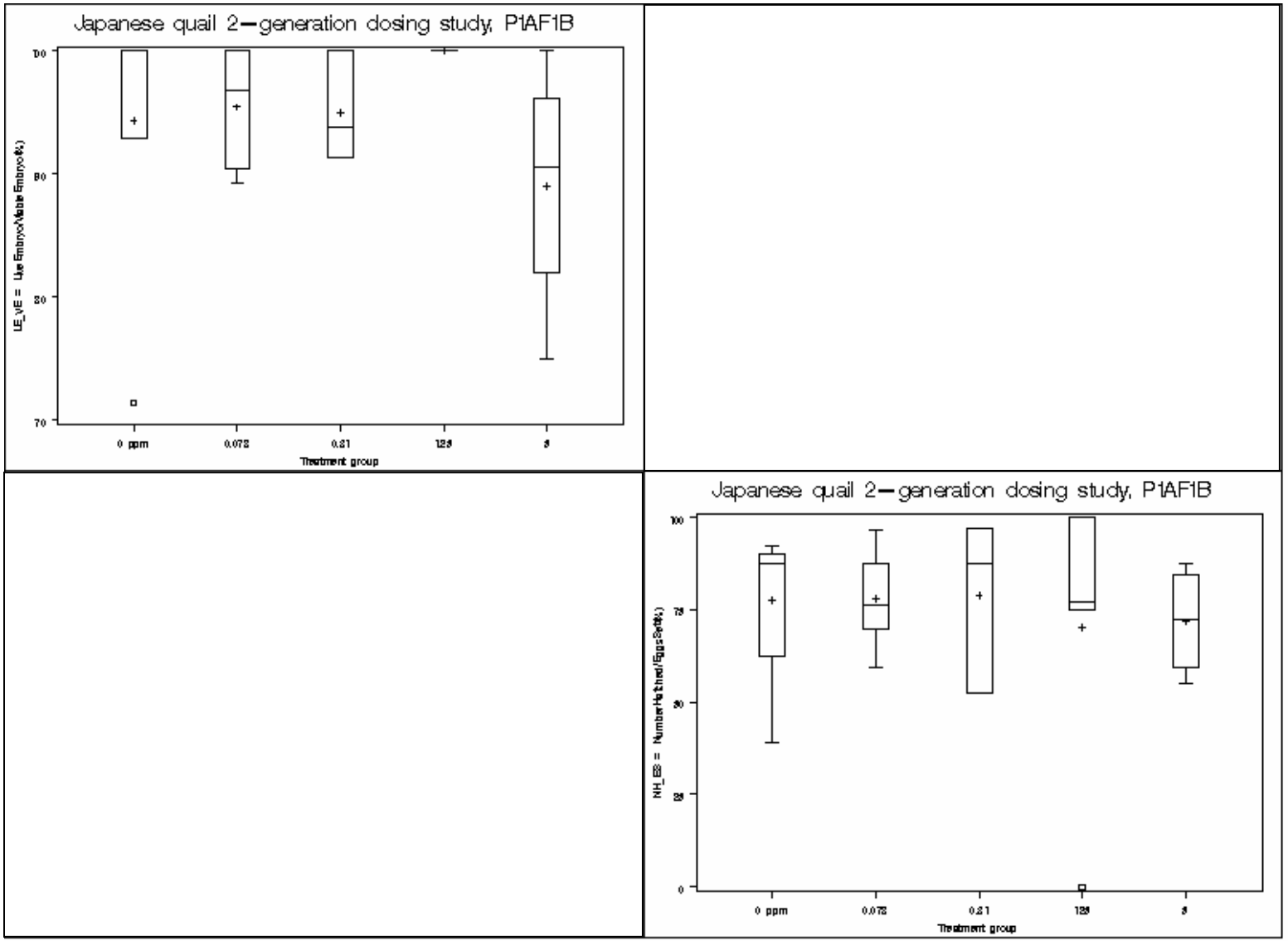
SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

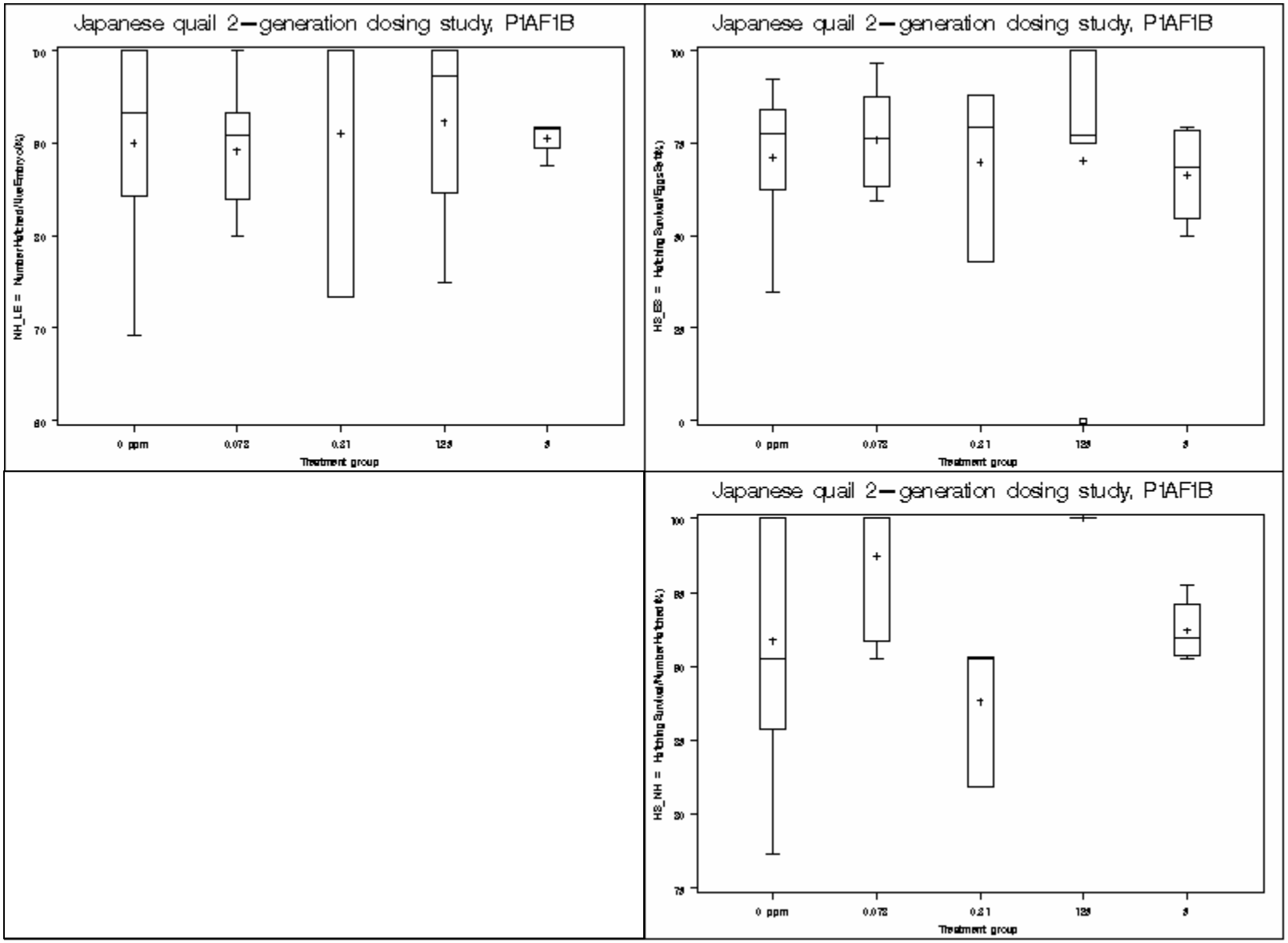

Japanese quail 2−generation dosing study, P1AF1B
EL = Eggs Laid
0 ppm
0.072
0.21
1.28
5
Treatment group

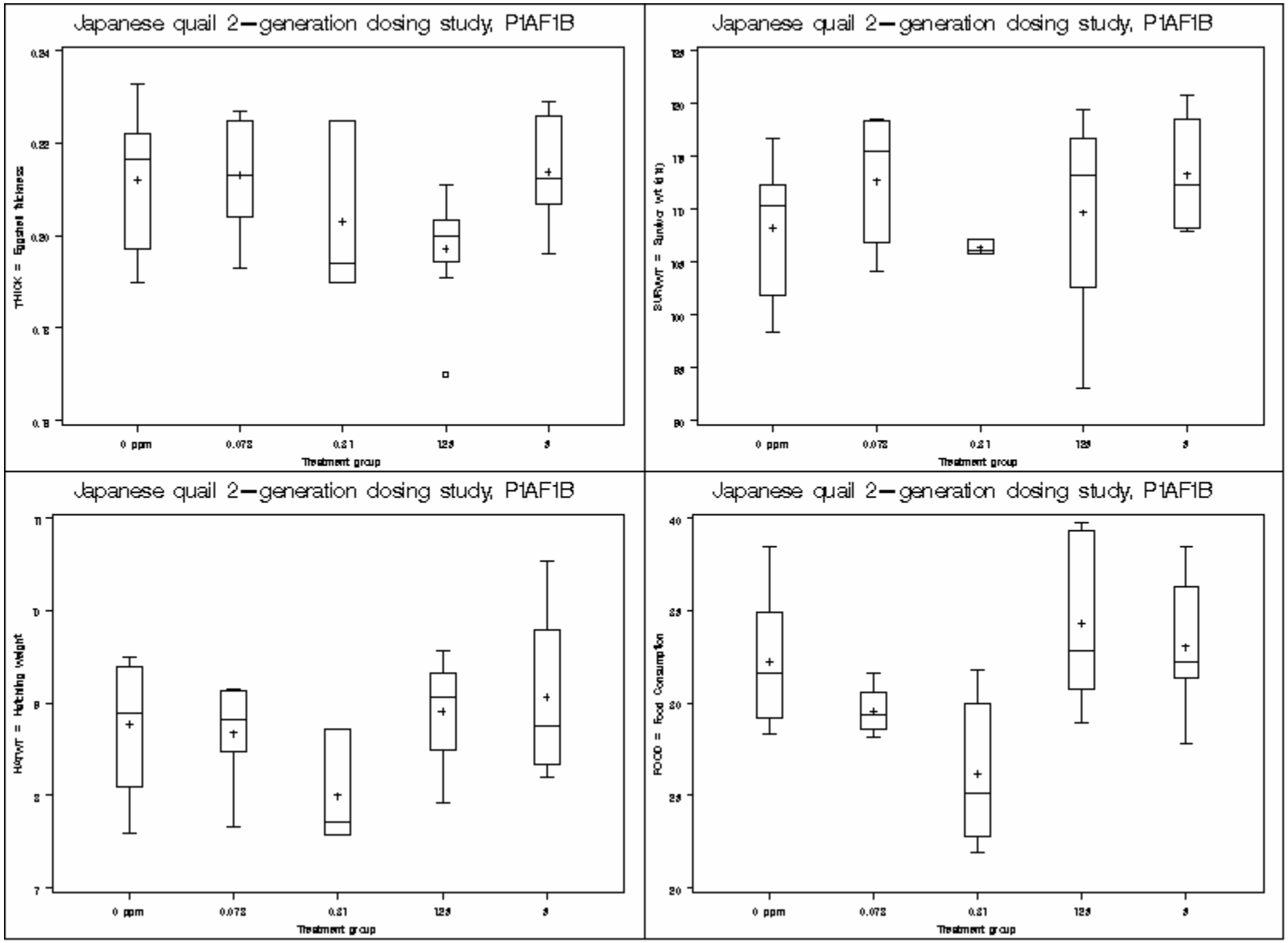

Japanese quail 2−generation dosing study, P1AF1B
ENC_EL = (EL− EC)/EL(%)
0 ppm
0.072
0.21
1.28
5
Treatment group

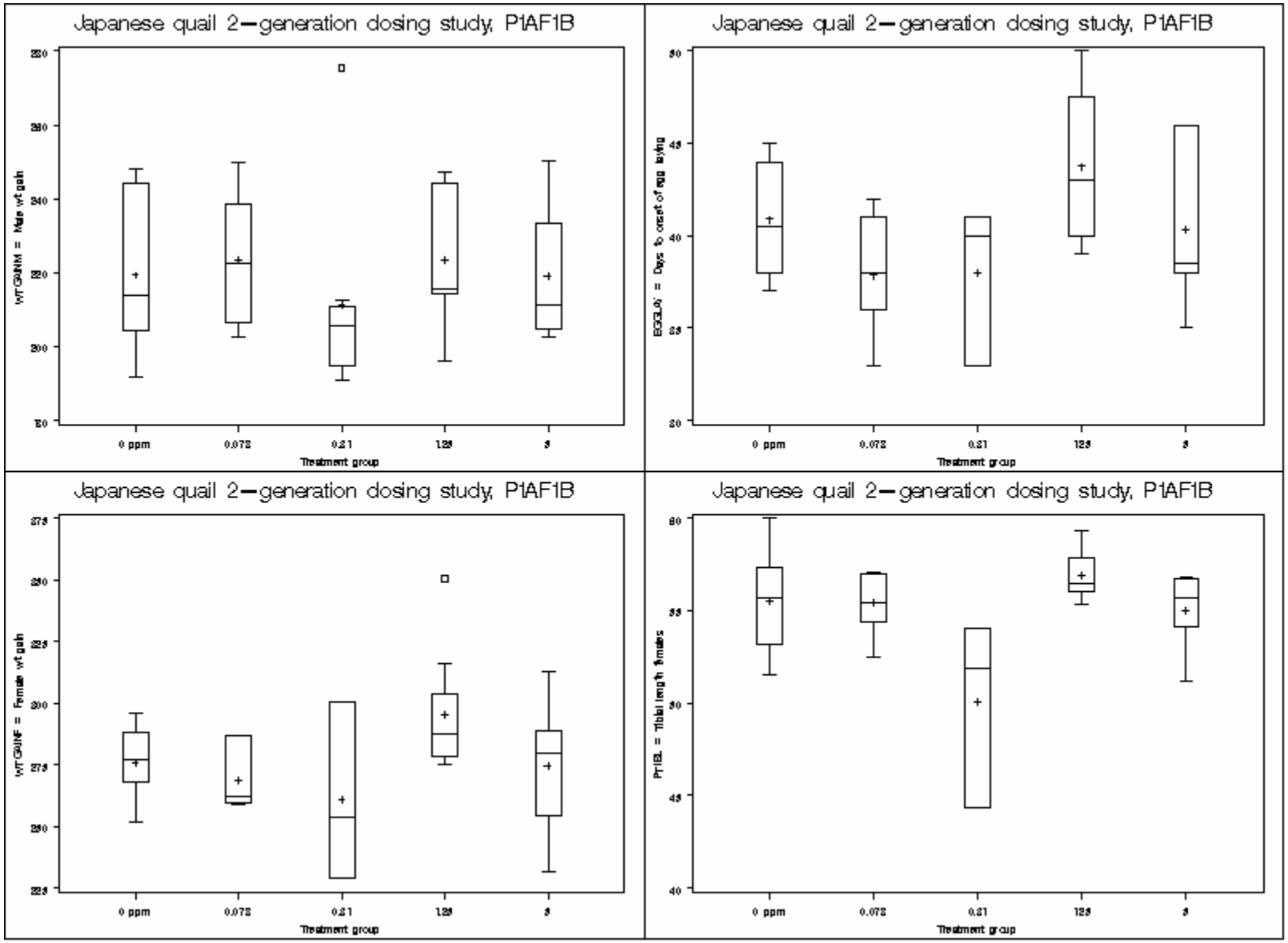

Japanese quail 2−generation dosing study, P1AF1B
EC = Eggs Cracked
0 ppm
0.072
0.21
1.28
5
Treatment group

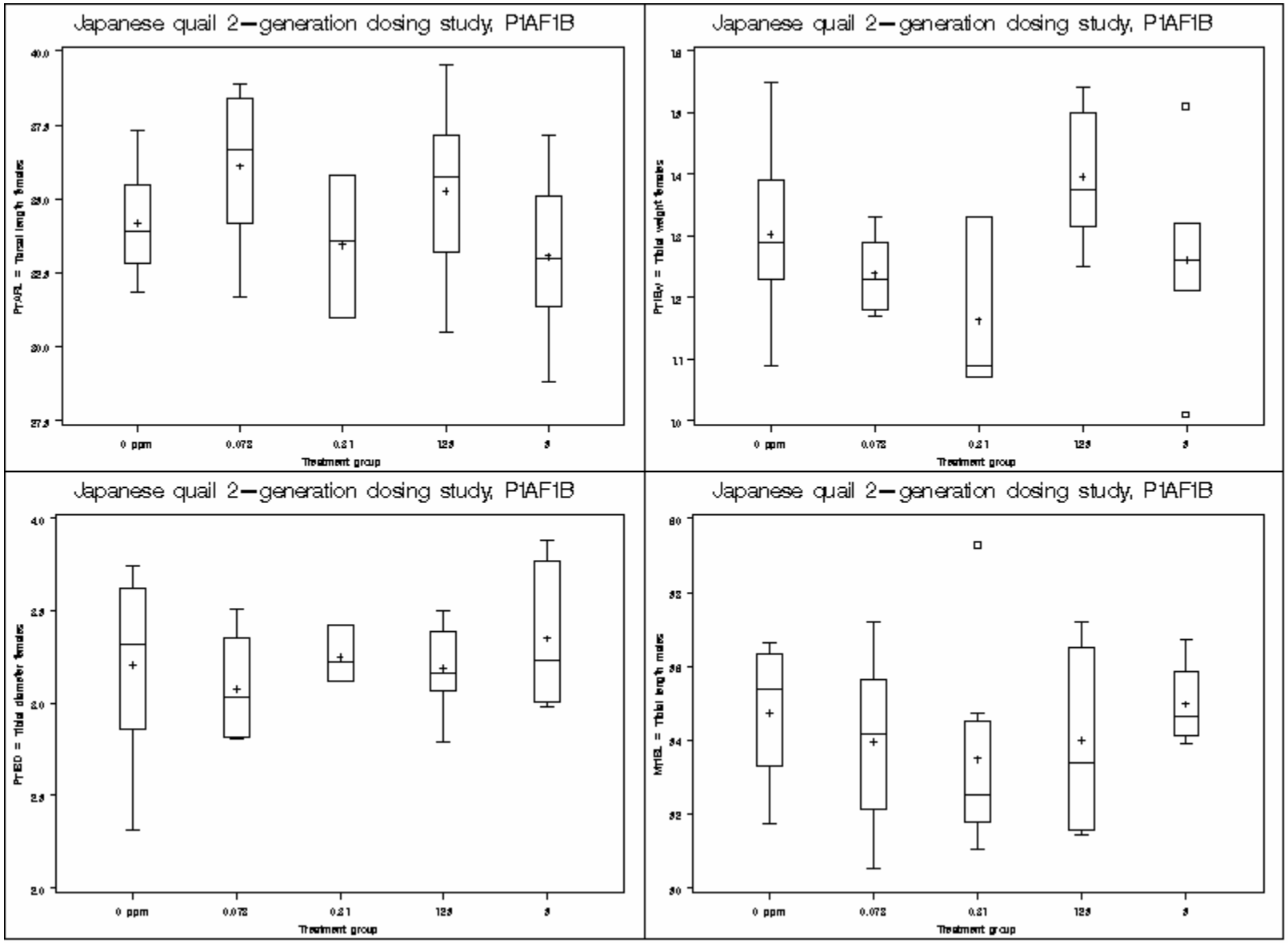

Japanese quail 2−generation dosing study, P1AF1B
100
75
50
0
0 ppm
0.073
0.21
125
5
Treatment group

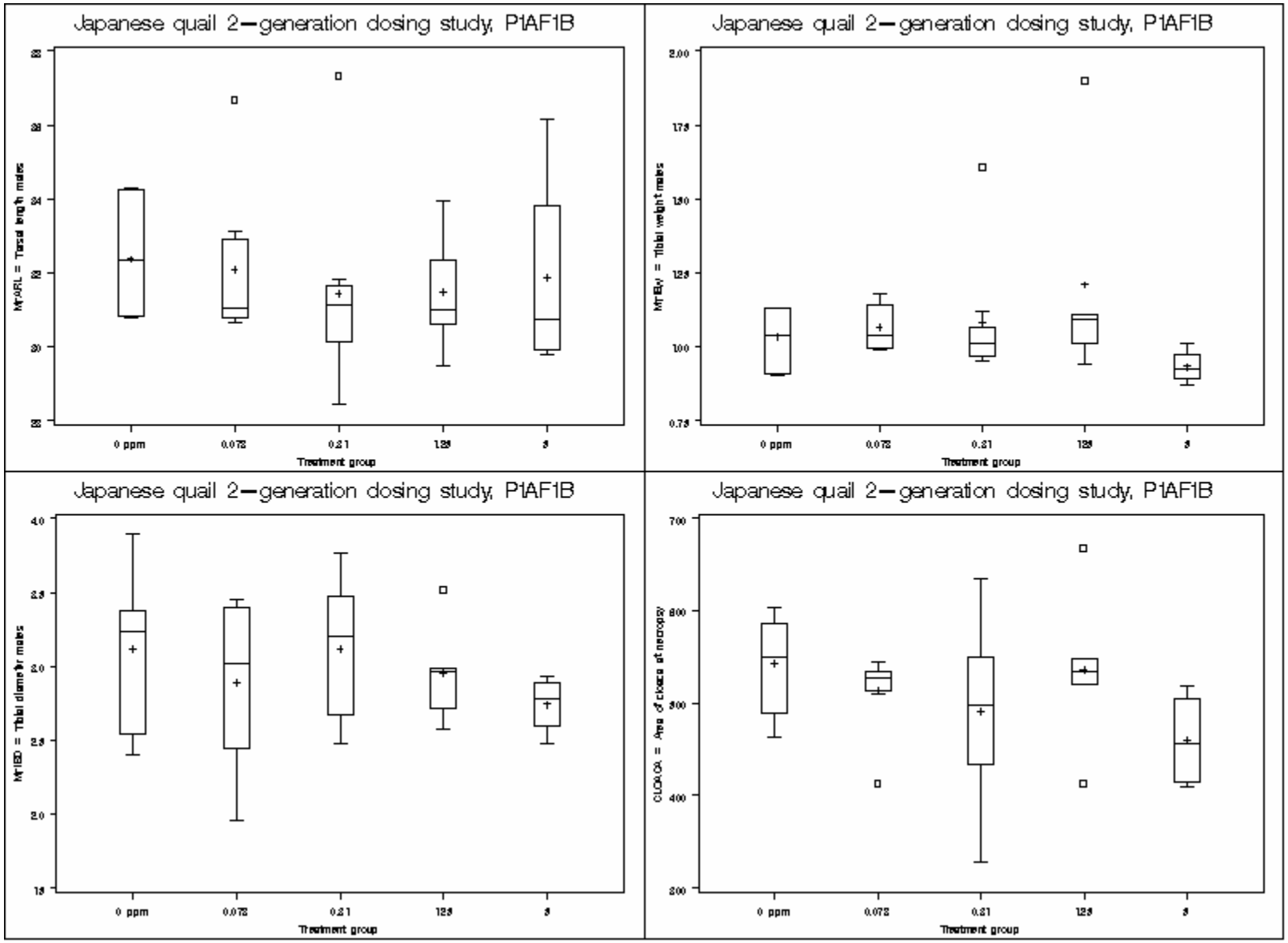

Japanese quail 2−generation dosing study, P1AF1B
LE_vE = Live Embryos/Viable Embryos(%)
100
90
80
70
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
NH_EG = Number Hatched/Eggs Set(%)
100
75
50
25
0
0 ppm
0.073
0.21
125
5
Treatment group

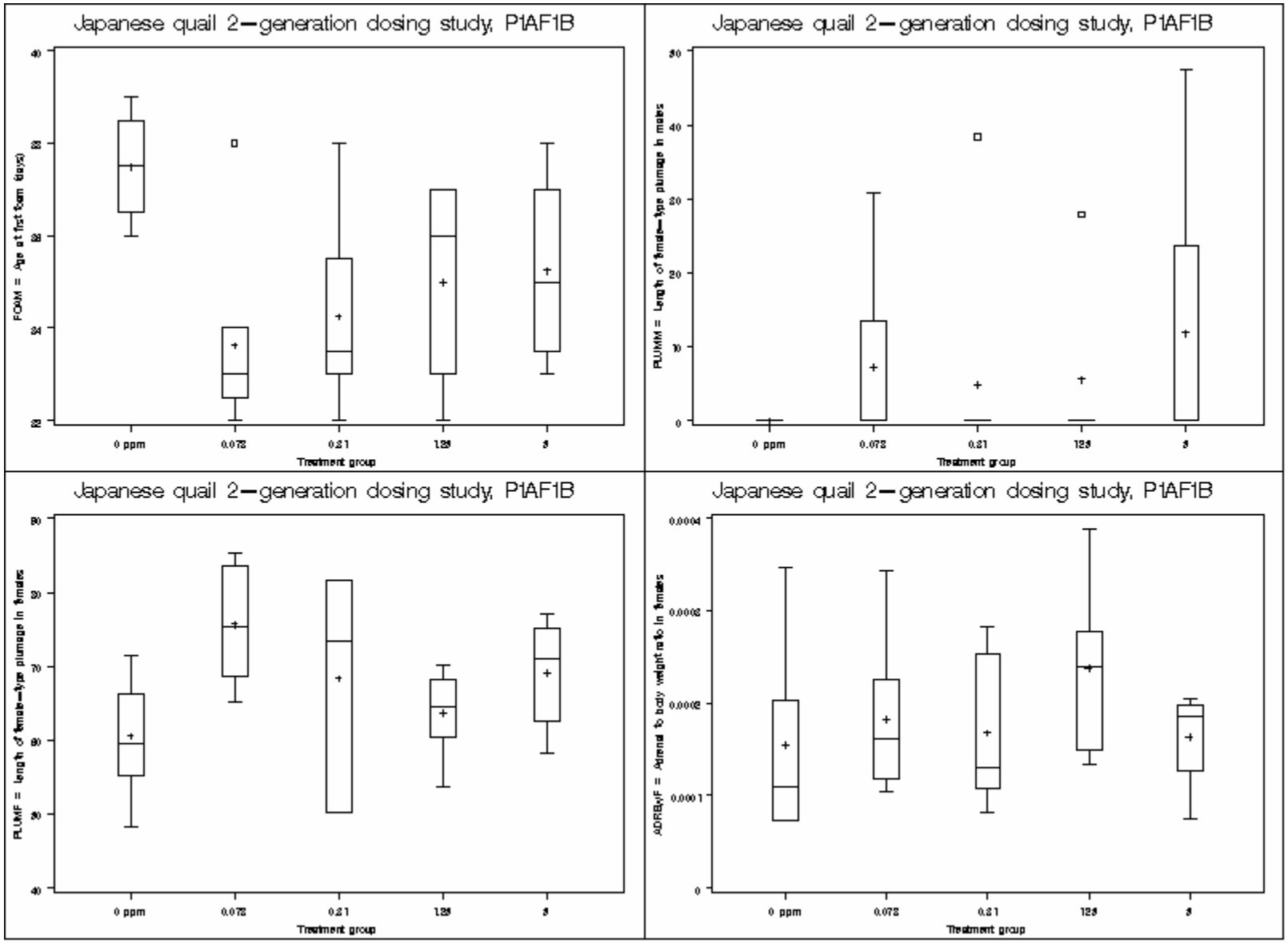

Japanese quail 2−generation dosing study, P1AF1B
NH_LE = Number Hatched/Live Embryo (%)
100
90
80
70
60
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
HS_EB = Hatching Survival/Eggs Set (%)
100
75
50
25
0
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
HS_NH = Hatching Survival/Number Hatched (%)
100
95
90
85
80
75
0 ppm
0.073
0.21
125
5
Treatment group

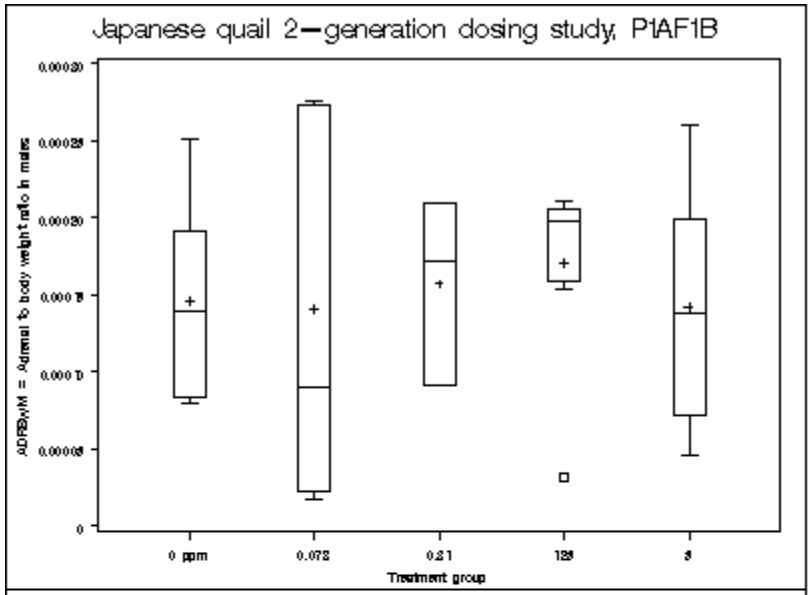

Japanese quail 2−generation dosing study, P1AF1B
THICK = Eggshell thickness
0.24
0.22
0.20
0.18
0.16
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
SURVWT = Survivor wt (g)
130
120
110
100
90
80
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
HATWT = Hatching weight
11
10
9
8
7
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
FOOD = Food Consumption
40
35
30
25
20
0 ppm
0.072
0.21
125
5
Treatment group

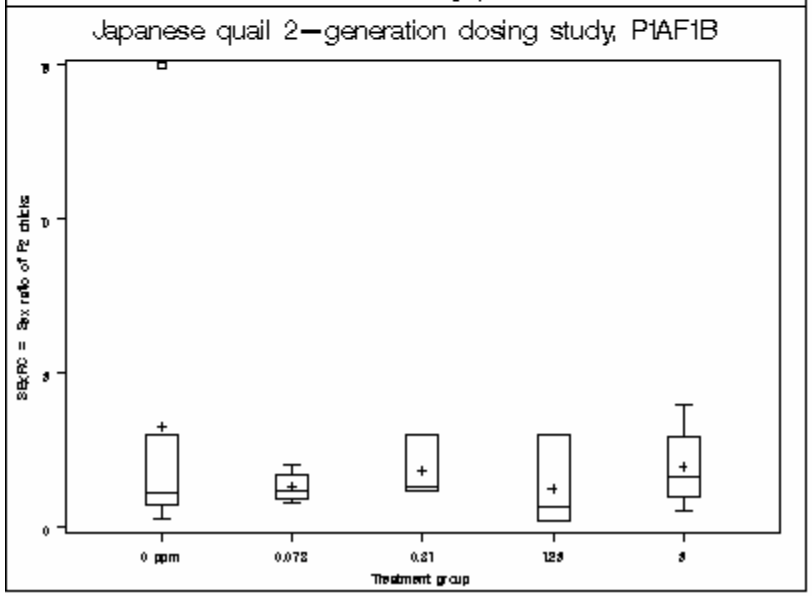

Japanese quail 2−generation dosing study, P1AF1B
WTGAINM = Male wt gain
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
EGGLAY = Days to onset of egg laying
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
WTGAINF = Female wt gain
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
PrTIBL = Tibial length females
0 ppm
0.072
0.21
128
5
Treatment group


Japanese quail 2−generation dosing study, P1AF1B
PrTARL = Tarsal length females
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1AF1B
PrTiBwt = Tibial weight females
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
PrTiED = Tibial diameter females
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
MrTiBL = Tibial length males
Treatment group


Japanese quail 2−generation dosing study, P1AF1B
MrTARL = Tarsal length males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
MrTBW = Tibial weight males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
MrTIBD = Tibial diameter males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1AF1B
CLOACA = Area of cloaca at necropsy
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1AF1B
FOAM = Age at first foam (days)
Treatment group
0 ppm
0.072
0.21
128
5
Japanese quail 2−generation dosing study, P1AF1B
PLUMM = Length of female−type plumage in males
Treatment group
0 ppm
0.072
0.21
128
5
Japanese quail 2−generation dosing study, P1AF1B
PLUMF = Length of female−type plumage in females
Treatment group
0 ppm
0.072
0.21
128
5
Japanese quail 2−generation dosing study, P1AF1B
ADRBWF = Adrenal to body weight ratio in females
Treatment group
0 ppm
0.072
0.21
128
5


Japanese quail 2−generation dosing study, P1AF1B
ADRBxyM = Adrenal to body weight ratio in males
0.00020
0.00015
0.00010
0.00005
0
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1AF1B
SEXRC = Sex ratio of F2 chicks
5
0
0 ppm
0.072
0.21
125
5
Treatment group

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE EL (Eggs Laid)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.971	0.482	0.643	0.636	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	41.82	7.96	2.40	19.04	36.47, 47.17
0.078	7	44.57	4.35	1.65	9.77	40.55, 48.60
0.31	4	43.25	5.91	2.95	13.66	33.85, 52.65
1.25	5	37.20	7.79	3.48	20.94	27.53, 46.87
5	8	42.13	5.33	1.88	12.65	37.67, 46.58

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	42.00	25.00	52.00	.	.
0.078	44.00	39.00	51.00	106.58	-6.58
0.31	45.00	35.00	48.00	103.42	-3.42
1.25	40.00	27.00	47.00	88.96	11.04
5	39.50	37.00	50.00	100.73	-0.73

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	30	0.97	0.436

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	41.82	.	42.95	.	0.907	0.996	0.691	1.000	.
0.078	44.57	0.982	42.95	0.726	.	0.998	0.331	0.950	.
0.31	43.25	0.932	42.95	0.738	.	.	0.649	0.999	.
1.25	37.20	0.287	40.23	0.432	.	.	.	0.684	.
5	42.13	0.875	40.23	0.409	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE NEG_EC (Eggs Cracked)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.942	0.066	0.559	0.694	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	4.91	3.48	1.05	70.83	2.57, 7.25
0.078	7	4.14	4.06	1.53	97.98	0.39, 7.90
0.31	4	4.75	2.87	1.44	60.47	0.18, 9.32
1.25	5	7.80	4.87	2.18	62.41	1.76, 13.84
5	8	5.63	2.83	1.00	50.23	3.26, 7.99

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	4.00	1.00	11.00	.	.
0.078	3.00	0.00	10.00	84.39	15.61
0.31	5.50	1.00	7.00	96.76	3.24
1.25	7.00	3.00	16.00	158.89	-58.89
5	5.50	2.00	11.00	114.58	-14.58

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	30	0.84	0.510

Dunnett - testing each trt mean signif. greater than control
Williams - test assumes dose-response relationship, testing positive trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	4.91	.	4.61	.	0.992	1.000	0.585	0.993	.
0.078	4.14	0.942	4.61	0.654	.	0.999	0.437	0.932	.
0.31	4.75	0.868	4.75	0.650	.	.	0.721	0.995	.
1.25	7.80	0.223	6.46	0.287	.	.	.	0.829	.
5	5.63	0.690	6.46	0.246	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE ENC_EL ((EL-EC)/EL (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.921	0.015	1.255	0.309	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	87.72	10.23	3.08	11.66	80.85, 94.59
0.078	7	90.22	9.69	3.66	10.74	81.26, 99.18
0.31	4	88.50	7.63	3.81	8.62	76.36, 100.00
1.25	5	77.26	16.68	7.46	21.58	56.55, 97.97
5	8	86.67	6.33	2.24	7.30	81.38, 91.97

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	91.49	64.00	97.14	.	.
0.078	92.31	77.27	100.00	102.85	-2.85
0.31	88.06	80.00	97.87	100.88	-0.88
1.25	82.50	50.00	92.50	88.07	11.93
5	86.89	76.60	94.74	98.80	1.20

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	30	1.31	0.288

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	87.72	.	88.69	.	0.987	1.000	0.347	0.999	.
0.078	90.22	0.951	88.69	0.664	.	0.999	0.226	0.962	.
0.31	88.50	0.882	88.50	0.672	.	.	0.492	0.998	.
1.25	77.26	0.113	83.05	0.269	.	.	.	0.506	.
5	86.67	0.774	83.05	0.227	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE VE_ES (ViableEmbryo/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.946	0.225	2.026	0.131	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	85.72	13.40	5.47	15.63	71.65, 99.78
0.078	7	90.49	7.01	2.65	7.74	84.01, 96.97
0.31	4	86.36	11.94	5.97	13.83	67.36, 100.00
1.25	5	97.09	4.60	2.06	4.74	91.38, 100.00
5	2	84.24	2.09	1.48	2.48	65.46, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	87.82	62.50	100.00	.	.
0.078	93.94	78.95	100.00	105.57	-5.57
0.31	88.70	71.88	96.15	100.75	-0.75
1.25	100.00	89.47	100.00	113.27	-13.27
5	84.24	82.76	85.71	98.27	1.73

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	19	1.32	0.297

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	85.72	.	89.94	.	0.892	1.000	0.312	1.000	.
0.078	90.49	0.979	89.94	0.859	.	0.955	0.757	0.920	.
0.31	86.36	0.861	89.94	0.860	.	.	0.464	0.999	.
1.25	97.09	0.999	89.94	0.885	.	.	.	0.503	.
5	84.24	0.766	84.24	0.562	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE LE_VE (LiveEmbryo/ViableEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.922	0.064	1.365	0.283	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	91.80	9.96	4.07	10.85	81.34, 100.00
0.078	7	94.08	4.83	1.82	5.13	89.61, 98.54
0.31	4	93.91	5.12	2.56	5.45	85.76, 100.00
1.25	5	97.16	3.99	1.78	4.11	92.20, 100.00
5	2	97.92	2.95	2.08	3.01	71.45, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	94.55	73.68	100.00	.	.
0.078	93.55	86.67	100.00	102.48	-2.48
0.31	93.83	88.00	100.00	102.30	-2.30
1.25	100.00	91.67	100.00	105.84	-5.84
5	97.92	95.83	100.00	106.67	-6.67

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	19	0.63	0.645

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	91.80	.	94.44	.	0.967	0.985	0.650	0.771	.
0.078	94.08	0.957	94.44	0.843	.	1.000	0.922	0.943	.
0.31	93.91	0.942	94.44	0.846	.	.	0.941	0.950	.
1.25	97.16	0.995	94.44	0.872	.	.	.	1.000	.
5	97.92	0.990	94.44	0.835	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE NH_ES (NumberHatched/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.950	0.266	2.304	0.096	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	68.91	16.48	6.73	23.92	51.62, 86.21
0.078	7	80.50	8.56	3.23	10.63	72.59, 88.41
0.31	4	69.71	11.61	5.81	16.66	51.23, 88.19
1.25	5	82.24	13.88	6.21	16.88	65.00, 99.48
5	2	70.07	8.19	5.79	11.68	0.00, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	69.55	50.00	86.21	.	.
0.078	81.82	63.16	90.00	116.81	-16.81
0.31	68.99	56.25	84.62	101.16	-1.16
1.25	84.62	64.00	100.00	119.33	-19.33
5	70.07	64.29	75.86	101.68	-1.68

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	19	1.33	0.293

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	68.91	.	75.77	.	0.488	1.000	0.435	1.000	.
0.078	80.50	0.998	75.77	0.896	.	0.659	0.999	0.839	.
0.31	69.71	0.859	75.77	0.894	.	.	0.589	1.000	.
1.25	82.24	0.998	75.77	0.916	.	.	.	0.779	.
5	70.07	0.863	70.07	0.696	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE NH_LE (NumberHatched/LiveEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.962	0.487	1.364	0.284	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	87.55	11.47	4.68	13.10	75.51, 99.59
0.078	7	94.48	3.92	1.48	4.15	90.86, 98.11
0.31	4	85.98	6.58	3.29	7.66	75.50, 96.45
1.25	5	86.75	9.77	4.37	11.26	74.61, 98.88
5	2	84.96	9.48	6.70	11.16	0.00, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	92.13	68.18	100.00	.	.
0.078	93.10	90.00	100.00	107.92	-7.92
0.31	83.22	81.82	95.65	98.20	1.80
1.25	87.50	72.73	100.00	99.08	0.92
5	84.96	78.26	91.67	97.05	2.95

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	19	1.12	0.378

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	87.55	.	91.28	.	0.588	0.998	1.000	0.995	.
0.078	94.48	0.996	91.28	0.858	.	0.510	0.535	0.631	.
0.31	85.98	0.728	86.40	0.524	.	.	1.000	1.000	.
1.25	86.75	0.778	86.40	0.535	.	.	.	0.999	.
5	84.96	0.692	84.96	0.476	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE HS_ES (HatchlingSurvival/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.971	0.695	3.015	0.044	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	61.93	17.48	7.13	28.22	43.59, 80.27
0.078	7	75.23	6.02	2.27	8.00	69.67, 80.80
0.31	4	63.88	12.40	6.20	19.41	44.15, 83.62
1.25	5	78.58	11.86	5.30	15.09	63.85, 93.31
5	2	66.63	3.31	2.34	4.97	36.89, 96.36

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	64.16	37.50	80.00	.	.
0.078	75.76	63.16	80.95	121.48	-21.48
0.31	60.82	53.13	80.77	103.16	-3.16
1.25	84.62	60.00	88.89	126.89	-26.89
5	66.63	64.29	68.97	107.59	-7.59

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	6.21	0.184

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	64.16	.	.
0.078	75.76	1.000	0.913
0.31	60.82	1.000	0.622
1.25	84.62	1.000	0.937
5	66.63	1.000	0.835

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE HS_NH (HatchlingSurvival/NumberHatched (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.963	0.502	1.570	0.223	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	89.25	10.04	4.10	11.25	78.71, 99.78
0.078	7	93.77	4.48	1.69	4.78	89.62, 97.91
0.31	4	91.54	6.50	3.25	7.10	81.20, 100.00
1.25	5	95.89	6.30	2.82	6.57	88.07, 100.00
5	2	95.45	6.43	4.55	6.73	37.70, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	89.33	75.00	100.00	.	.
0.078	92.59	88.89	100.00	105.07	-5.07
0.31	94.44	81.82	95.45	102.57	-2.57
1.25	100.00	85.71	100.00	107.45	-7.45
5	95.45	90.91	100.00	106.95	-6.95

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	19	0.75	0.569

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	89.25	.	92.85	.	0.779	0.986	0.544	0.817	.
0.078	93.77	0.990	92.85	0.884	.	0.986	0.985	0.998	.
0.31	91.54	0.941	92.85	0.883	.	.	0.887	0.967	.
1.25	95.89	0.997	92.85	0.907	.	.	.	1.000	.
5	95.45	0.987	92.85	0.868	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE THICK (Eggshell thickness)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.967	0.343	0.573	0.684	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	0.21	0.01	0.00	6.08	0.20, 0.22
0.078	7	0.22	0.01	0.00	4.99	0.21, 0.23
0.31	4	0.22	0.01	0.01	5.47	0.20, 0.24
1.25	5	0.20	0.01	0.00	4.54	0.19, 0.21
5	8	0.20	0.01	0.00	5.46	0.19, 0.21

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.21	0.19	0.23	.	.
0.078	0.21	0.21	0.24	102.37	-2.37
0.31	0.22	0.21	0.23	105.04	-5.04
1.25	0.20	0.19	0.22	95.35	4.65
5	0.21	0.19	0.22	97.18	2.82

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	31	2.57	0.057

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.21	.	0.21	.	0.892	0.516	0.515	0.793	.
0.078	0.22	0.986	0.21	0.810	.	0.936	0.213	0.379	.
0.31	0.22	0.999	0.21	0.809	.	.	0.089	0.161	.
1.25	0.20	0.189	0.20	0.155	.	.	.	0.976	.
5	0.20	0.367	0.20	0.112	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE HATWT (Hatchling Weight)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.973	0.726	1.294	0.306	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	8.53	0.56	0.21	6.55	8.01, 9.05
0.078	7	8.21	0.42	0.16	5.14	7.82, 8.60
0.31	4	8.45	0.79	0.40	9.39	7.19, 9.71
1.25	5	9.06	0.48	0.21	5.27	8.47, 9.65
5	2	8.65	1.06	0.75	12.26	0.00, 18.18

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	8.60	7.70	9.50	.	.
0.078	8.30	7.40	8.80	96.31	3.69
0.31	8.60	7.40	9.20	99.08	0.92
1.25	9.10	8.50	9.70	106.23	-6.23
5	8.65	7.90	9.40	101.42	-1.42

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	1.57	0.222

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	8.53	.	8.54	.	0.851	0.999	0.545	0.999	.
0.078	8.21	0.414	8.54	0.604	.	0.966	0.139	0.883	.
0.31	8.45	0.769	8.54	0.636	.	.	0.543	0.994	.
1.25	9.06	0.998	8.54	0.656	.	.	.	0.916	.
5	8.65	0.906	8.54	0.663	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE SURVWT (Survivor Wt (d14))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.960	0.408	0.872	0.498	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	106.53	2.52	0.95	2.37	104.20, 108.86
0.078	7	112.51	5.60	2.11	4.97	107.34, 117.69
0.31	4	111.95	5.85	2.93	5.23	102.63, 121.27
1.25	5	116.90	7.41	3.31	6.34	107.70, 126.10
5	2	110.05	5.44	3.85	4.95	61.13, 158.97

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	107.10	102.50	109.80	.	.
0.078	112.70	104.80	120.10	105.62	-5.62
0.31	110.25	106.90	120.40	105.09	-5.09
1.25	115.40	109.80	129.40	109.74	-9.74
5	110.05	106.20	113.90	103.31	-3.31

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	2.86	0.050

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	106.53	.	111.55	.	0.266	0.509	0.027	0.922	.
0.078	112.51	1.000	111.55	0.979	.	1.000	0.639	0.978	.
0.31	111.95	0.998	111.55	0.974	.	.	0.651	0.994	.
1.25	116.90	1.000	111.55	0.984	.	.	.	0.560	.
5	110.05	0.977	110.05	0.910	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FOOD (Food Consumption)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.984	0.871	6.557	<.001	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	33.14	1.90	0.57	5.74	31.86, 34.42
0.078	7	30.74	2.39	0.90	7.78	28.53, 32.96
0.31	4	29.88	0.70	0.35	2.34	28.76, 30.99
1.25	5	30.76	0.65	0.29	2.10	29.96, 31.56
5	8	33.46	3.85	1.36	11.49	30.25, 36.68

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.80	30.60	36.30	.	.
0.078	30.90	27.00	34.90	92.78	7.22
0.31	29.90	29.00	30.70	90.16	9.84
1.25	31.00	29.90	31.50	92.83	7.17
5	34.00	28.60	38.60	100.98	-0.98

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	9.97	0.041

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	32.80	.	.
0.078	30.90	0.114	0.018
0.31	29.90	0.036	0.001
1.25	31.00	0.077	0.004
5	34.00	1.000	0.163

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	0.078	0.31
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINM (Male wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.970	0.636	1.093	0.387	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	214.59	13.46	5.09	6.27	202.14, 227.04
0.078	7	209.61	21.81	8.24	10.41	189.44, 229.79
0.31	4	206.93	9.65	4.82	4.66	191.57, 222.28
1.25	5	219.26	23.04	10.30	10.51	190.65, 247.87
5	2	211.80	21.64	15.30	10.22	17.40, 406.20

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	216.80	193.50	229.70	.	.
0.078	216.50	177.30	241.50	97.68	2.32
0.31	209.10	193.50	216.00	96.43	3.57
1.25	212.00	198.90	256.00	102.18	-2.18
5	211.80	196.50	227.10	98.70	1.30

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.32	0.858

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	214.59	.	214.59	.	0.986	0.962	0.992	1.000	.
0.078	209.61	0.648	211.96	0.469	.	0.999	0.896	1.000	.
0.31	206.93	0.574	211.96	0.517	.	.	0.854	0.998	.
1.25	219.26	0.937	211.96	0.527	.	.	.	0.988	.
5	211.80	0.778	211.80	0.563	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINF (Female wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.983	0.836	3.811	0.012	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	261.68	20.39	5.89	7.79	248.72, 274.63
0.078	7	272.46	14.59	5.51	5.35	258.97, 285.95
0.31	4	274.65	9.26	4.63	3.37	259.91, 289.39
1.25	5	280.72	37.15	16.61	13.23	234.60, 326.84
5	8	264.21	17.27	6.11	6.54	249.77, 278.65

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	262.90	232.20	289.30	.	.
0.078	272.20	249.40	290.10	104.12	-4.12
0.31	276.30	261.90	284.10	104.96	-4.96
1.25	295.20	229.00	322.70	107.28	-7.28
5	261.35	242.20	291.70	100.97	-0.97

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.78	0.437

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	262.90	.	.
0.078	272.20	1.000	0.898
0.31	276.30	1.000	0.943
1.25	295.20	1.000	0.969
5	261.35	1.000	0.764

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE EGGLAY (Days to onset of egg laying)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.973	0.522	3.272	0.024	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	39.58	2.97	0.86	7.50	37.70, 41.47
0.078	7	39.00	1.41	0.53	3.63	37.69, 40.31
0.31	4	42.75	4.99	2.50	11.68	34.81, 50.69
1.25	5	47.20	5.59	2.50	11.83	40.26, 54.14
5	8	41.38	4.14	1.46	10.00	37.92, 44.83

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	39.00	36.00	47.00	.	.
0.078	39.00	36.00	40.00	98.53	1.47
0.31	44.00	36.00	47.00	108.00	-8.00
1.25	46.00	41.00	53.00	119.24	-19.24
5	41.50	36.00	49.00	104.53	-4.53

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	10.47	0.033

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	39.00	.	.
0.078	39.00	1.000	0.366
0.31	44.00	1.000	0.787
1.25	46.00	1.000	0.994
5	41.50	1.000	0.976

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBL (Tibial length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.957	0.188	1.130	0.361	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	53.70	1.92	0.58	3.57	52.41, 54.98
0.078	7	54.91	2.97	1.12	5.40	52.17, 57.66
0.31	4	55.53	1.85	0.92	3.33	52.58, 58.47
1.25	5	56.31	1.02	0.46	1.81	55.05, 57.58
5	8	53.62	1.89	0.67	3.52	52.04, 55.20

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	53.89	50.62	56.14	.	.
0.078	55.03	51.56	59.91	102.27	-2.27
0.31	55.95	52.92	57.28	103.41	-3.41
1.25	56.63	54.75	57.38	104.87	-4.87
5	54.20	50.30	55.61	99.86	0.14

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	30	2.04	0.114

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	53.70	.	54.77	.	0.743	0.564	0.160	1.000	.
0.078	54.91	0.994	54.77	0.915	.	0.989	0.777	0.749	.
0.31	55.53	0.998	54.77	0.904	.	.	0.979	0.571	.
1.25	56.31	1.000	54.77	0.929	.	.	.	0.180	.
5	53.62	0.824	53.62	0.614	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTARL (Tarsal length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.938	0.043	1.019	0.413	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	34.71	2.38	0.69	6.86	33.20, 36.22
0.078	7	35.47	4.78	1.81	13.49	31.05, 39.90
0.31	4	33.92	2.16	1.08	6.36	30.48, 37.35
1.25	5	36.02	3.02	1.35	8.37	32.28, 39.77
5	8	33.17	1.93	0.68	5.81	31.55, 34.78

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	34.42	31.14	40.18	.	.
0.078	34.77	30.21	44.93	102.20	-2.20
0.31	33.11	32.39	37.06	97.72	2.28
1.25	36.90	31.33	39.40	103.79	-3.79
5	33.76	29.57	35.67	95.55	4.45

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	31	0.95	0.447

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	34.71	.	35.02	.	0.983	0.990	0.920	0.787	.
0.078	35.47	0.958	35.02	0.674	.	0.919	0.998	0.574	.
0.31	33.92	0.681	35.02	0.694	.	.	0.829	0.994	.
1.25	36.02	0.982	35.02	0.719	.	.	.	0.460	.
5	33.17	0.362	33.17	0.178	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBD (Tibial diameter of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.939	0.053	2.604	0.056	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval	
0 ppm	11	2.98	0.30	0.09	10.16	2.78,	3.19
0.078	7	3.15	0.50	0.19	15.97	2.68,	3.61
0.31	4	3.15	0.30	0.15	9.60	2.67,	3.63
1.25	5	2.87	0.17	0.08	5.88	2.66,	3.08
5	8	2.99	0.12	0.04	4.17	2.89,	3.09

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	2.96	2.46	3.67	.	.
0.078	2.94	2.65	4.04	105.45	-5.45
0.31	3.16	2.78	3.50	105.46	-5.46
1.25	2.94	2.66	3.05	96.10	3.90
5	2.97	2.75	3.13	100.18	-0.18

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	30	0.80	0.532

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	2.98	.	3.07	.	0.817	0.897	0.957	1.000	.
0.078	3.15	0.991	3.07	0.788	.	1.000	0.555	0.866	.
0.31	3.15	0.984	3.07	0.791	.	.	0.674	0.922	.
1.25	2.87	0.566	2.94	0.525	.	.	.	0.958	.
5	2.99	0.858	2.94	0.517	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBW (Tibial weight of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.976	0.613	4.648	0.005	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval	
0 ppm	11	1.11	0.09	0.03	8.46	1.05,	1.17
0.078	7	1.38	0.18	0.07	12.78	1.21,	1.54
0.31	4	1.56	0.11	0.06	7.18	1.38,	1.74
1.25	5	1.38	0.27	0.12	19.75	1.04,	1.71
5	8	1.32	0.29	0.10	21.99	1.07,	1.56

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.12	0.94	1.26	.	.
0.078	1.47	1.14	1.58	123.94	-23.94
0.31	1.58	1.42	1.66	140.54	-40.54
1.25	1.31	1.06	1.75	123.96	-23.96
5	1.27	0.97	1.78	118.58	-18.58

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	13.37	0.010

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	1.12	.	.
0.078	1.47	1.000	0.998
0.31	1.58	1.000	1.000
1.25	1.31	1.000	1.000
5	1.27	1.000	0.989

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBL (Tibial length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.854	0.002	2.198	0.106	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	53.09	2.54	0.96	4.78	50.75, 55.44
0.078	7	52.26	1.85	0.70	3.55	50.54, 53.97
0.31	4	52.18	3.26	1.63	6.25	46.99, 57.36
1.25	5	51.77	7.05	3.15	13.62	43.02, 60.52
5	2	54.19	0.77	0.54	1.42	47.26, 61.11

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	53.48	49.17	57.22	.	.
0.078	52.60	48.64	54.68	98.42	1.58
0.31	51.83	48.62	56.43	98.27	1.73
1.25	54.30	39.48	57.21	97.50	2.50
5	54.19	53.64	54.73	102.05	-2.05

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	3.11	0.540

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	53.48	.	.
0.078	52.60	1.000	0.283
0.31	51.83	1.000	0.174
1.25	54.30	1.000	0.555
5	54.19	1.000	0.743

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTARL (Tarsal length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.975	0.759	1.088	0.389	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	32.66	1.58	0.60	4.84	31.20, 34.12
0.078	7	33.31	1.66	0.63	4.99	31.78, 34.85
0.31	4	33.06	0.92	0.46	2.78	31.60, 34.52
1.25	5	33.71	1.02	0.45	3.01	32.45, 34.97
5	2	31.61	1.20	0.85	3.78	20.87, 42.34

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.99	30.08	34.28	.	.
0.078	33.01	30.93	36.03	102.02	-2.02
0.31	32.99	32.01	34.25	101.24	-1.24
1.25	33.51	32.23	34.71	103.22	-3.22
5	31.61	30.76	32.45	96.78	3.22

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	1.00	0.433

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	32.66	.	33.15	.	0.903	0.990	0.709	0.882	.
0.078	33.31	0.980	33.15	0.824	.	0.998	0.989	0.566	.
0.31	33.06	0.941	33.15	0.827	.	.	0.958	0.755	.
1.25	33.71	0.994	33.15	0.854	.	.	.	0.410	.
5	31.61	0.447	31.61	0.245	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBD (Tibial diameter of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.946	0.204	1.955	0.140	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	2.99	0.26	0.10	8.64	2.75, 3.23
0.078	7	2.86	0.45	0.17	15.57	2.45, 3.27
0.31	4	2.71	0.59	0.30	21.83	1.77, 3.64
1.25	5	2.94	0.42	0.19	14.19	2.42, 3.46
5	2	2.46	0.04	0.03	1.72	2.08, 2.84

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.00	2.64	3.38	.	.
0.078	2.76	2.36	3.62	95.65	4.35
0.31	2.54	2.20	3.54	90.43	9.57
1.25	3.24	2.47	3.25	98.35	1.65
5	2.46	2.43	2.49	82.23	17.77

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.86	0.507

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	2.99	.	2.99	.	0.974	0.795	1.000	0.501	.
0.078	2.86	0.605	2.86	0.333	.	0.972	0.997	0.737	.
0.31	2.71	0.362	2.84	0.352	.	.	0.906	0.956	.
1.25	2.94	0.771	2.84	0.347	.	.	.	0.628	.
5	2.46	0.180	2.46	0.078	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBW (Tibial weight of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.975	0.762	1.388	0.274	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.93	0.18	0.07	19.73	0.76, 1.10
0.078	7	1.07	0.12	0.05	11.54	0.96, 1.19
0.31	4	1.00	0.10	0.05	9.84	0.84, 1.15
1.25	5	1.05	0.15	0.07	14.13	0.86, 1.23
5	2	1.07	0.01	0.00	0.66	1.00, 1.13

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.99	0.58	1.08	.	.
0.078	1.06	0.90	1.26	115.38	-15.38
0.31	1.01	0.87	1.10	107.42	-7.42
1.25	1.01	0.89	1.28	112.65	-12.65
5	1.07	1.06	1.07	114.69	-14.69

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	1.05	0.409

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.93	.	1.01	.	0.365	0.937	0.634	0.757	.
0.078	1.07	0.999	1.01	0.921	.	0.920	0.998	1.000	.
0.31	1.00	0.974	1.01	0.915	.	.	0.986	0.981	.
1.25	1.05	0.996	1.01	0.936	.	.	.	1.000	.
5	1.07	0.992	1.01	0.896	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE CLOACA (Cloacal area at necropsy (males))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.938	0.133	1.856	0.158	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	499.89	93.07	35.18	18.62	413.82, 585.97
0.078	7	504.58	44.18	16.70	8.76	463.72, 545.44
0.31	4	539.20	89.58	44.79	16.61	396.66, 681.75
1.25	5	491.01	28.80	12.88	5.87	455.25, 526.77
5	2	447.79	19.34	13.67	4.32	274.04, 621.54

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	512.68	360.85	636.68	.	.
0.078	487.68	468.00	601.08	100.94	-0.94
0.31	501.04	482.33	672.41	107.86	-7.86
1.25	491.64	448.80	529.01	98.22	1.78
5	447.79	434.12	461.46	89.58	10.42

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.66	0.626

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	499.89	.	510.45	.	1.000	0.883	0.999	0.869	.
0.078	504.58	0.877	510.45	0.701	.	0.922	0.997	0.830	.
0.31	539.20	0.983	510.45	0.720	.	.	0.823	0.537	.
1.25	491.01	0.765	491.01	0.535	.	.	.	0.938	.
5	447.79	0.433	447.79	0.235	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FOAM (Age at first foam (days))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.883	0.008	1.004	0.429	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	35.71	3.45	1.30	9.66	32.52, 38.91
0.078	7	34.00	1.53	0.58	4.49	32.59, 35.41
0.31	4	34.25	1.50	0.75	4.38	31.86, 36.64
1.25	5	38.40	2.07	0.93	5.40	35.83, 40.97
5	2	36.00	0.00	0.00	0.00	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	35.00	33.00	43.00	.	.
0.078	33.00	33.00	37.00	95.20	4.80
0.31	34.00	33.00	36.00	95.90	4.10
1.25	39.00	35.00	40.00	107.52	-7.52
5	36.00	36.00	36.00	100.80	-0.80

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	9.59	0.048

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	35.00	.	.
0.078	33.00	0.610	0.128
0.31	34.00	1.000	0.183
1.25	39.00	1.000	0.913
5	36.00	1.000	0.943

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMF (Female-type plumage length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.973	0.524	0.413	0.798	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	65.53	10.93	3.30	16.68	58.18, 72.87
0.078	7	66.84	11.41	4.31	17.08	56.29, 77.40
0.31	4	57.93	8.23	4.12	14.21	44.82, 71.03
1.25	5	60.57	5.97	2.67	9.86	53.16, 67.98
5	8	65.36	7.26	2.57	11.11	59.29, 71.43

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	66.88	47.59	90.83	.	.
0.078	68.50	50.88	79.82	102.01	-2.01
0.31	54.49	52.53	70.19	88.40	11.60
1.25	62.26	52.98	66.94	92.44	7.56
5	66.21	53.74	76.63	99.74	0.26

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	30	0.84	0.509

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	65.53	.	66.04	.	0.998	0.648	0.866	1.000	.
0.078	66.84	0.917	66.04	0.630	.	0.569	0.789	0.998	.
0.31	57.93	0.260	62.20	0.352	.	.	0.993	0.704	.
1.25	60.57	0.433	62.20	0.344	.	.	.	0.900	.
5	65.36	0.836	62.20	0.309	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMM (Female-type plumage length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.897	0.016	2.154	0.112	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	13.14	22.58	8.53	171.83	0.00, 34.02
0.078	7	4.37	11.56	4.37	264.58	0.00, 15.06
0.31	4	45.34	14.63	7.31	32.26	22.07, 68.61
1.25	5	51.24	13.70	6.13	26.74	34.23, 68.25
5	2	57.95	10.71	7.57	18.49	0.00, 154.19

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	50.30	.	.
0.078	0.00	0.00	30.59	33.25	66.75
0.31	46.00	30.15	59.20	345.00	-245.00
1.25	57.72	30.26	64.63	389.88	-289.88
5	57.95	50.37	65.52	440.93	-340.93

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	10.36	<.001

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	13.14	.	27.04	.	0.852	0.037	0.006	0.021	.
0.078	4.37	0.414	27.04	0.970	.	0.006	<.001	0.005	.
0.31	45.34	1.000	27.04	0.964	.	.	0.982	0.898	.
1.25	51.24	1.000	27.04	0.977	.	.	.	0.987	.
5	57.95	1.000	27.04	0.947	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWF (Adrenal to Body Weight ratio in female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.983	0.851	0.162	0.956	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	0.00	0.00	0.00	51.26	0.00, 0.00
0.078	7	0.00	0.00	0.00	49.09	0.00, 0.00
0.31	4	0.00	0.00	0.00	54.26	0.00, 0.00
1.25	5	0.00	0.00	0.00	44.84	0.00, 0.00
5	8	0.00	0.00	0.00	40.44	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	104.42	-4.42
0.31	0.00	0.00	0.00	75.71	24.29
1.25	0.00	0.00	0.00	131.34	-31.34
5	0.00	0.00	0.00	101.31	-1.31

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	31	0.73	0.576

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	1.000	0.911	0.754	1.000	.
0.078	0.00	0.901	0.00	0.641	.	0.883	0.882	1.000	.
0.31	0.00	0.493	0.00	0.666	.	.	0.459	0.913	.
1.25	0.00	0.994	0.00	0.689	.	.	.	0.821	.
5	0.00	0.869	0.00	0.674	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWM (Adrenal to Body Weight ratio in males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.935	0.114	3.043	0.041	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	55.60	0.00, 0.00
0.078	7	0.00	0.00	0.00	40.28	0.00, 0.00
0.31	4	0.00	0.00	0.00	36.05	0.00, 0.00
1.25	5	0.00	0.00	0.00	59.31	0.00, 0.00
5	2	0.00	0.00	0.00	88.16	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	72.79	27.21
0.31	0.00	0.00	0.00	105.43	-5.43
1.25	0.00	0.00	0.00	101.25	-1.25
5	0.00	0.00	0.00	94.51	5.49

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	1.60	0.809

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.283
0.31	0.00	1.000	0.643
1.25	0.00	1.000	0.700
5	0.00	1.000	0.623

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1A
16:06 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE SEXRC (Sex ratio of F2 chicks)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.792	<.001	1.202	0.341	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	1.22	0.53	0.20	43.55	0.73, 1.71
0.078	7	1.87	1.92	0.73	103.03	0.09, 3.65
0.31	4	1.08	0.48	0.24	44.42	0.32, 1.85
1.25	5	1.42	1.51	0.68	106.22	0.00, 3.30
5	2	1.21	0.50	0.36	41.59	0.00, 5.75

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.00	0.67	2.20	.	.
0.078	1.63	0.43	6.00	153.50	-53.50
0.31	1.08	0.50	1.67	89.05	10.95
1.25	0.86	0.38	4.00	116.99	-16.99
5	1.21	0.86	1.57	99.78	0.22

****

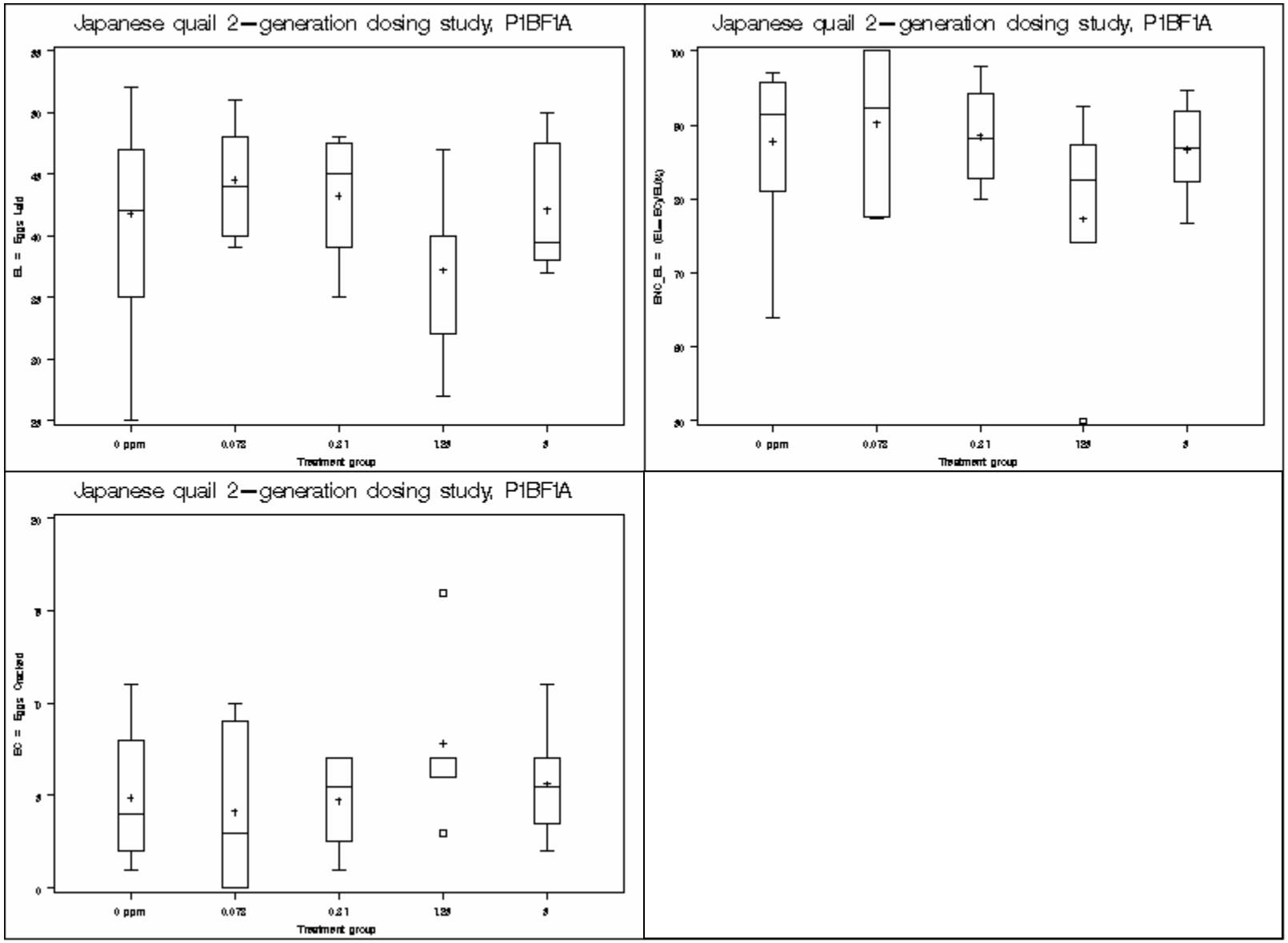
NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

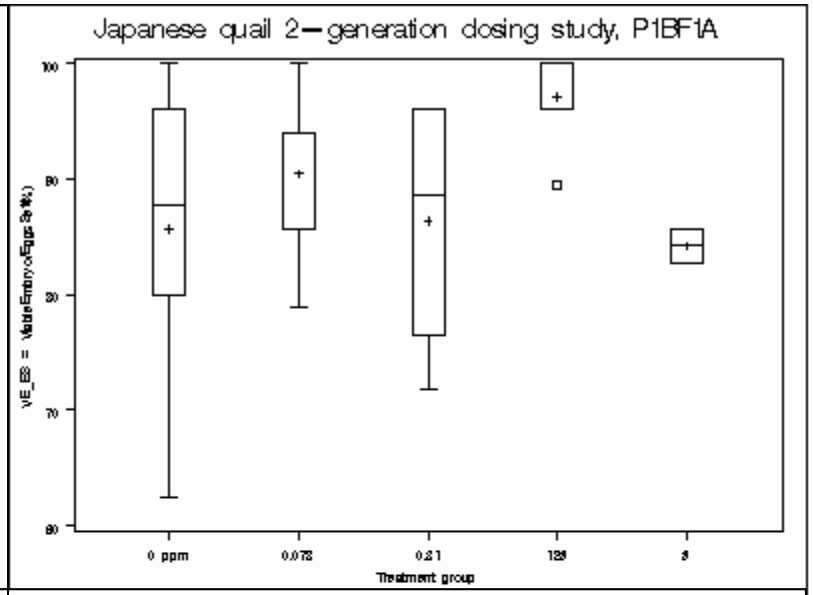
Degrees of Freedom	TestStat	P-value
4	0.94	0.918

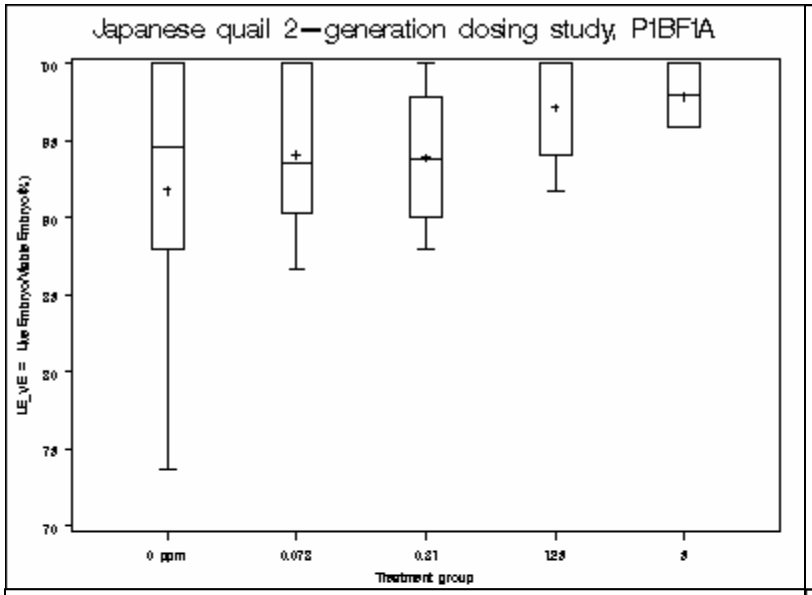
MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

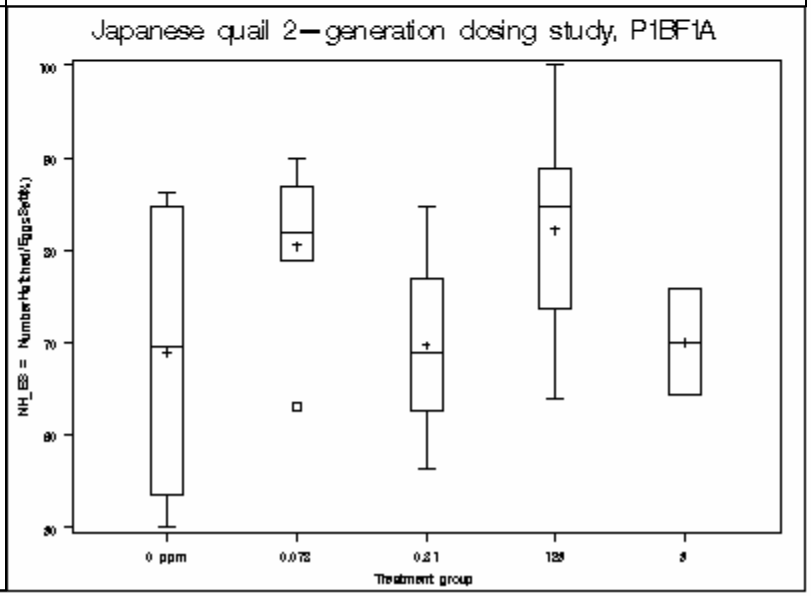
Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	1.00	.	.
0.078	1.63	1.000	0.576
0.31	1.08	1.000	0.419
1.25	0.86	1.000	0.228
5	1.21	1.000	0.265

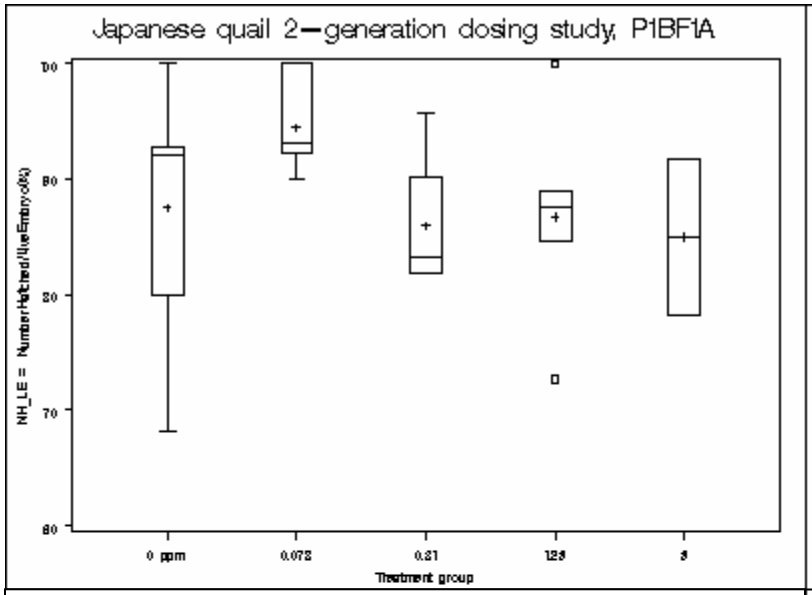
SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

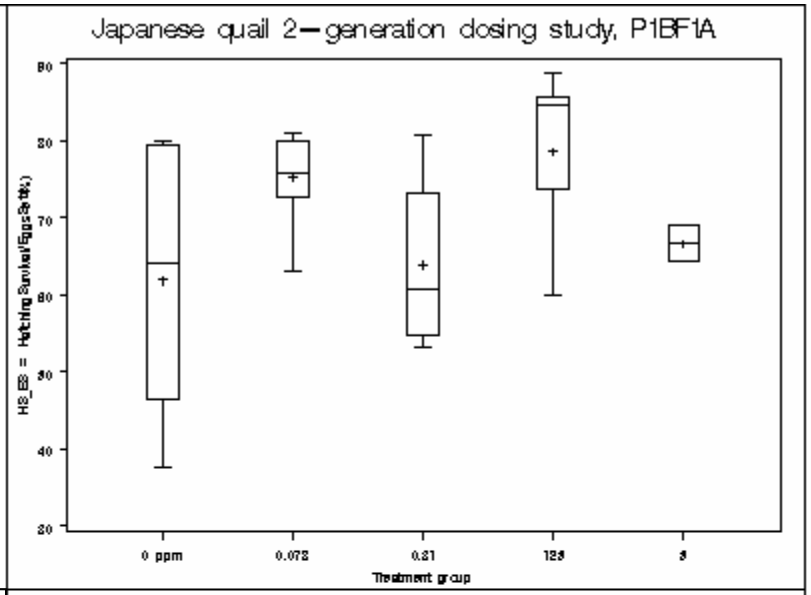

Japanese quail 2−generation dosing study, P1BF1A
EL = Eggs Laid
0 ppm
0.072
0.21
1.28
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
ENC_EL = (EL− EC)/EL(%)
0 ppm
0.072
0.21
1.28
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
EC = Eggs Cracked
0 ppm
0.072
0.21
1.28
5
Treatment group

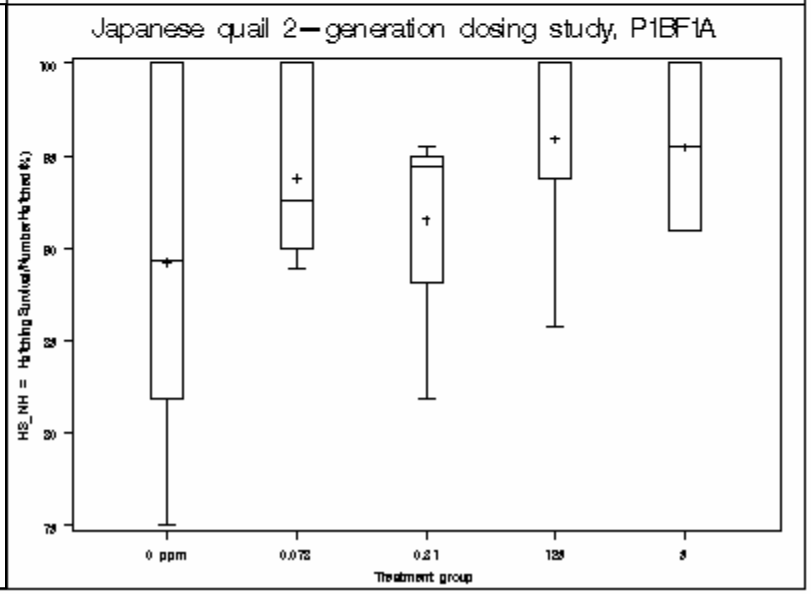

Japanese quail 2−generation dosing study, P1BF1A
100
90
80
70
0 ppm
0.073
0.21
1.38
3
Treatment group

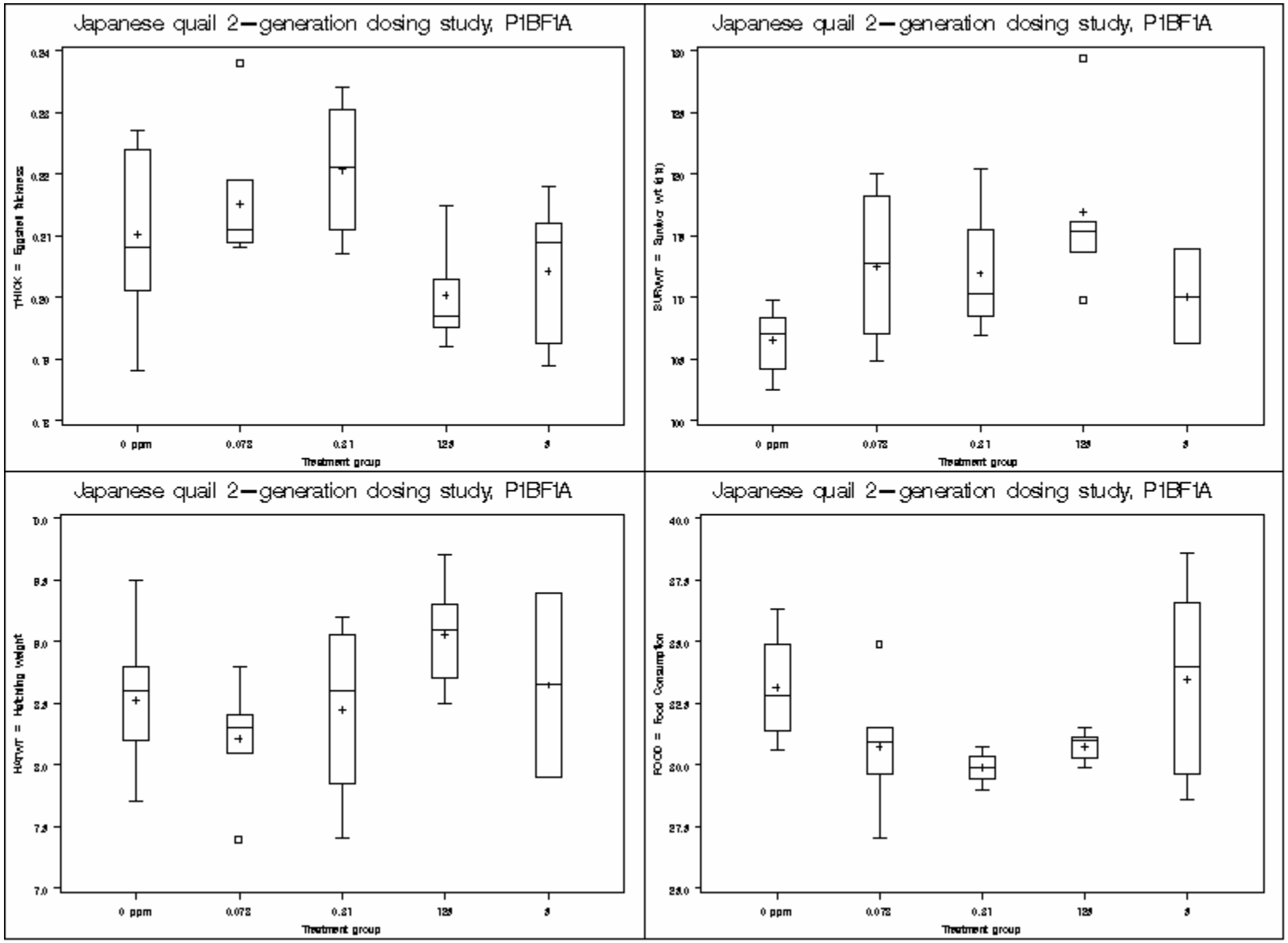

Japanese quail 2−generation dosing study, P1BF1A
LE_VE = Live Embryo/Viable Embryo(%)
100
90
80
70
0 ppm
0.073
0.21
1.25
5
Treatment group

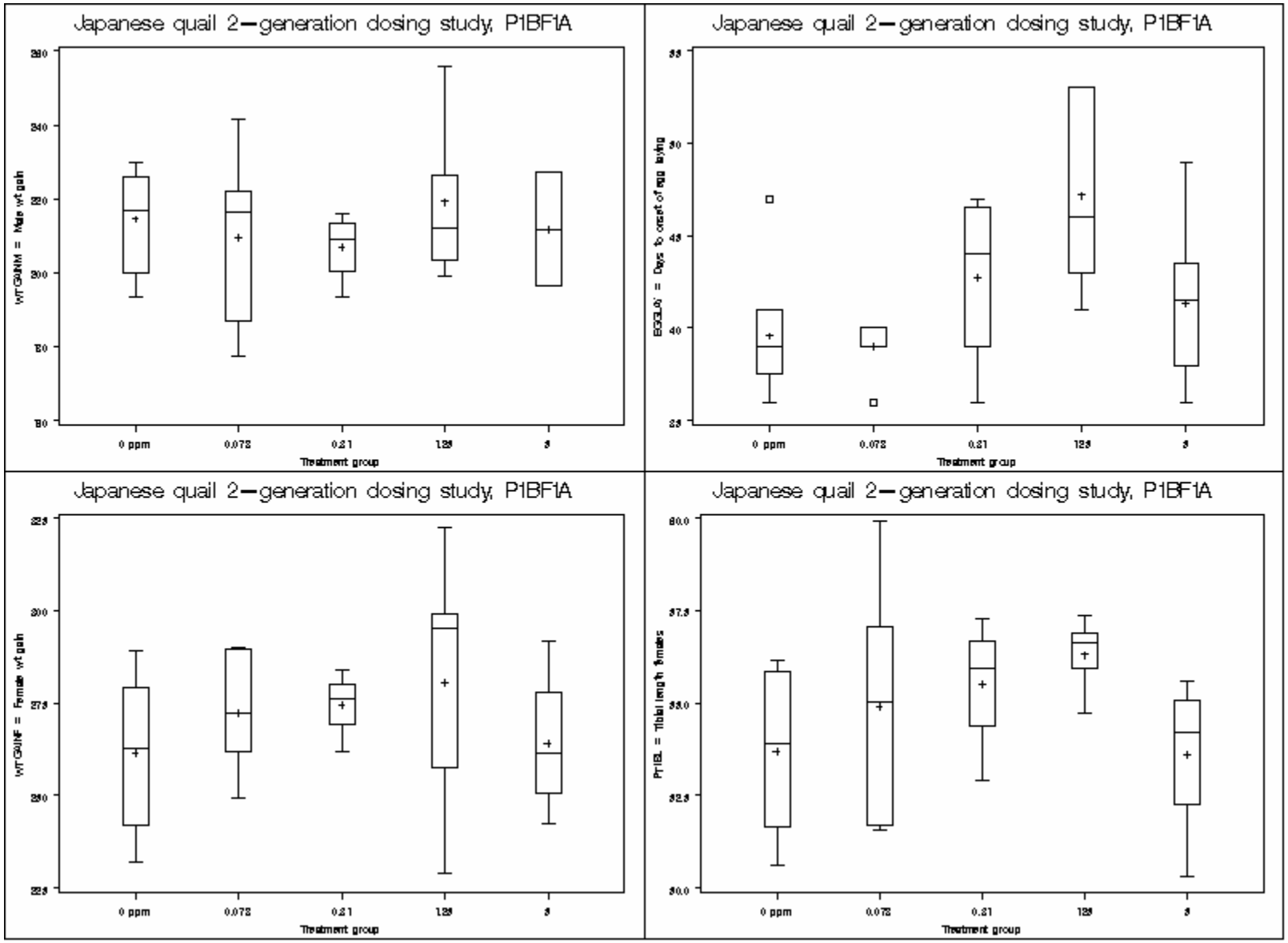

Japanese quail 2−generation dosing study, P1BF1A
NH_ES = Number Hatched/Eggs Set(%)
100
90
80
70
60
0 ppm
0.073
0.21
1.25
5
Treatment group

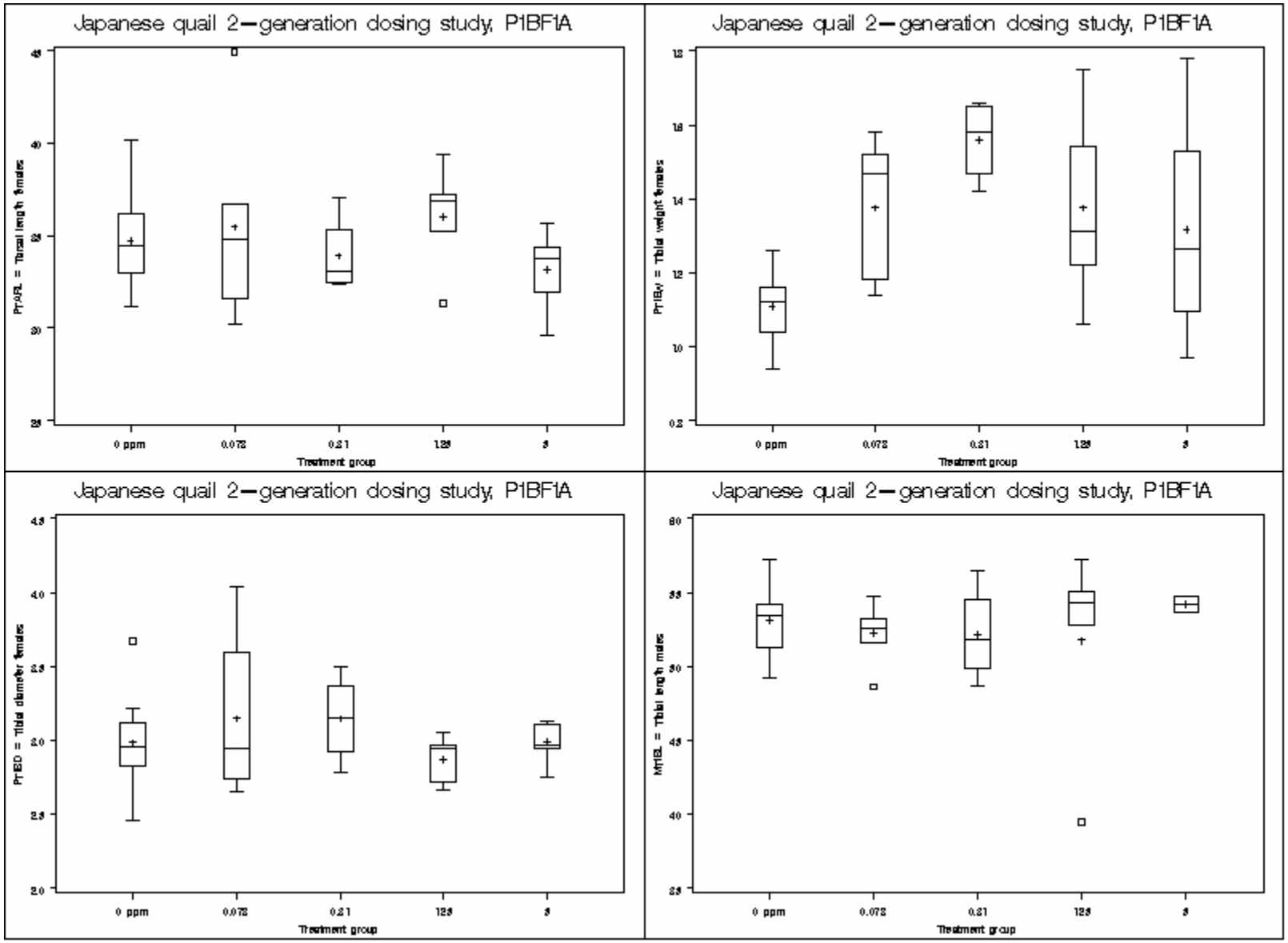

Japanese quail 2−generation dosing study, P1BF1A
NH_LE = Number Hatched/(Live Embryo)(%)
100
90
80
70
60
0 ppm
0.073
0.21
125
5
Treatment group

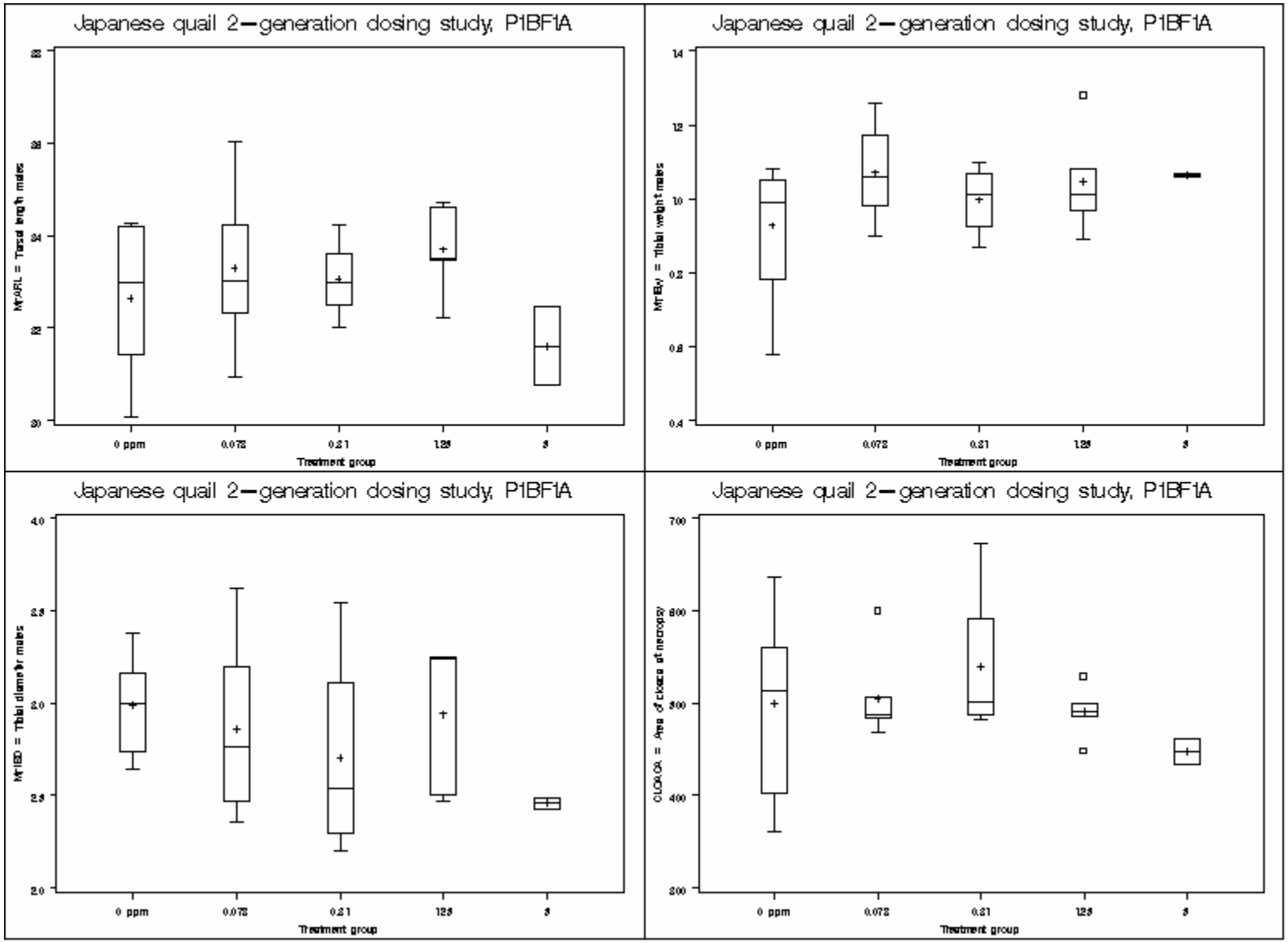

Japanese quail 2−generation dosing study, P1BF1A
HS_EB = Hatching Survival/Eggs Set(%)
80
70
60
50
40
30
0 ppm
0.073
0.21
125
5
Treatment group

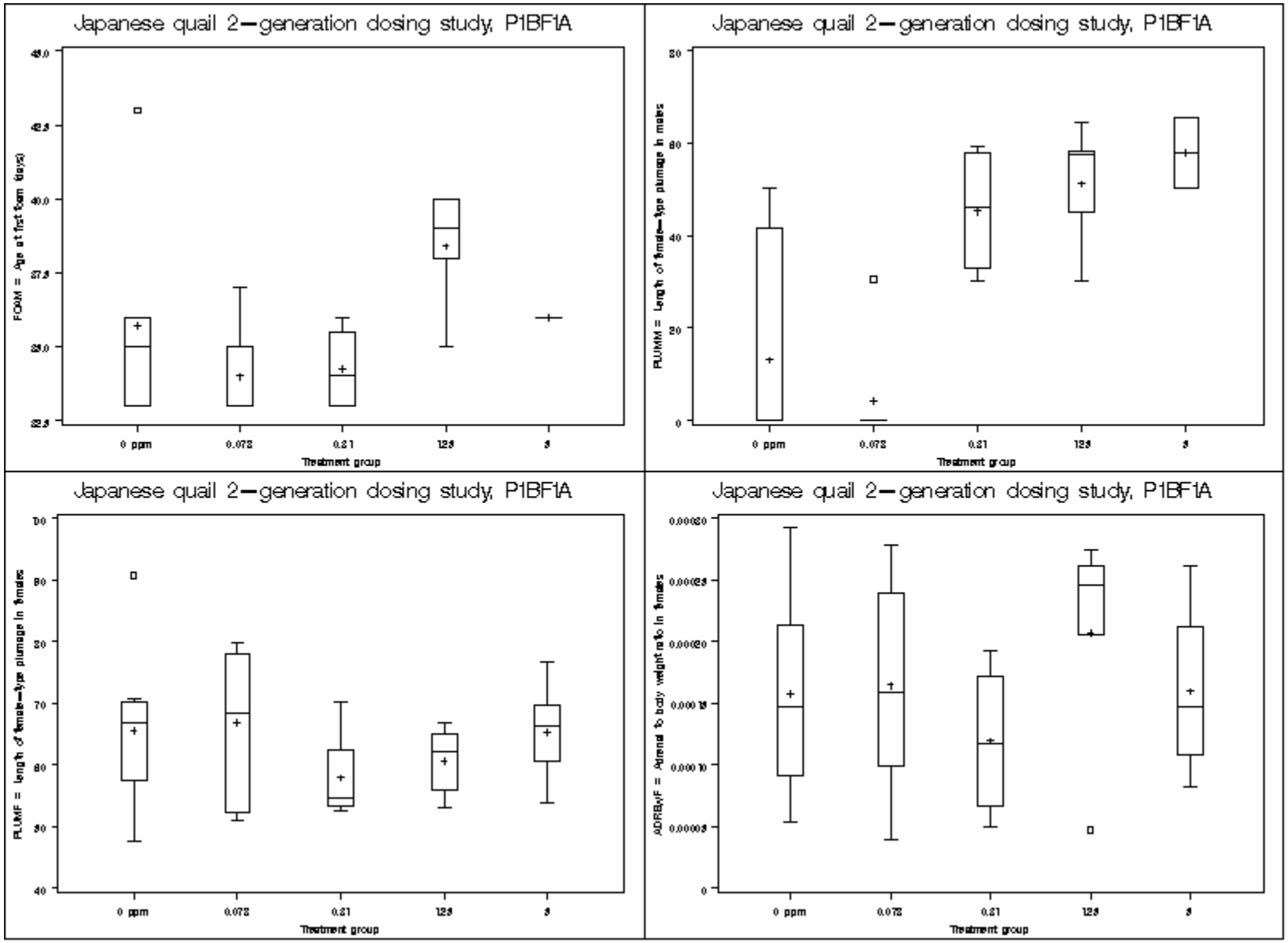

Japanese quail 2−generation dosing study, P1BF1A
HS_NH = Hatching Survival/Number Hatched(%)
100
90
80
70
0 ppm
0.073
0.21
125
5
Treatment group

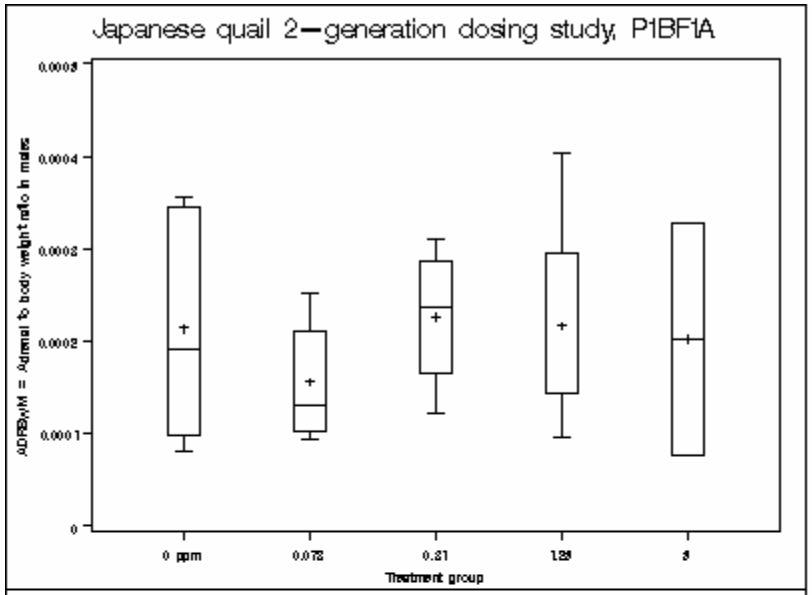

Japanese quail 2−generation dosing study, P1BF1A
THICK = Eggshell thickness
0.24
0.23
0.22
0.21
0.20
0.19
0.18
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
SURVWT = Survivor wt (g)
130
125
120
115
110
105
100
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
HATWT = Hatching weight
9.0
8.5
8.0
7.5
7.0
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
FOOD = Food Consumption
40.0
37.5
35.0
32.5
30.0
27.5
25.0
0 ppm
0.072
0.21
125
5
Treatment group

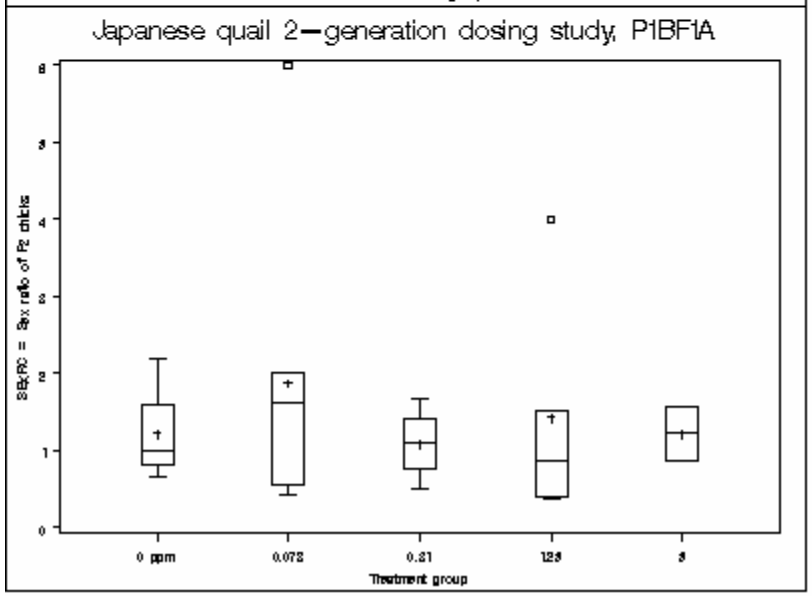

Japanese quail 2−generation dosing study, P1BF1A
WTGAINM = Male wt gain
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1BF1A
EGGLAY = Days to onset of egg laying
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1BF1A
WTGAINF = Female wt gain
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1BF1A
PrTIBL = Tibial length females
Treatment group
0 ppm
0.072
0.21
125
5


Japanese quail 2−generation dosing study, P1BF1A
PrTARL = Tarsal length females
Treatment group
0 ppm
0.072
0.21
128
5
Japanese quail 2−generation dosing study, P1BF1A
PrTiBwt = Tibial weight females
Treatment group
0 ppm
0.072
0.21
128
5
Japanese quail 2−generation dosing study, P1BF1A
PrTiED = Tibial diameter females
Treatment group
0 ppm
0.072
0.21
128
5
Japanese quail 2−generation dosing study, P1BF1A
MrTiBL = Tibial length males
Treatment group
0 ppm
0.072
0.21
128
5


Japanese quail 2−generation dosing study, P1BF1A
MrTARL = Tarsal length males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
MrTBW = Tibial weight males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
MrTIBD = Tibial diameter males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
CLOACA = Area of cloaca at necropsy
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1BF1A
FOAM = Age at first foam (days)
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
PLUMM = Length of female−type plumage in males
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
PLUMF = Length of female−type plumage in females
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1A
ADRBxF = Adrenal to body weight ratio in females
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1BF1A
0.0005
0.0004
0.0003
0.0002
0.0001
0
ADRBy/M = Adrenal to body weight ratio in males
0 ppm
0.072
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1BF1A
6
5
4
3
2
1
0
SEx/RC = Sex ratio of F2 chicks
0 ppm
0.072
0.21
125
5
Treatment group

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE EL (Eggs Laid)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.939	0.142	1.342	0.289	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	41.82	7.96	2.40	19.04	36.47, 47.17
0.078	2	43.00	5.66	4.00	13.16	0.00, 93.82
0.31	3	44.00	3.61	2.08	8.19	35.04, 52.96
1.25	5	44.20	4.44	1.98	10.04	38.69, 49.71
5	4	44.75	1.50	0.75	3.35	42.36, 47.14

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	42.00	25.00	52.00	.	.
0.078	43.00	39.00	47.00	102.83	-2.83
0.31	43.00	41.00	48.00	105.22	-5.22
1.25	46.00	37.00	48.00	105.70	-5.70
5	45.00	43.00	46.00	107.01	-7.01

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.24	0.912

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	41.82	.	43.12	.	0.999	0.982	0.952	0.926	.
0.078	43.00	0.933	43.12	0.694	.	1.000	0.999	0.997	.
0.31	44.00	0.970	43.12	0.747	.	.	1.000	1.000	.
1.25	44.20	0.982	43.12	0.788	.	.	.	1.000	.
5	44.75	0.987	43.12	0.789	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE NEG_EC (Eggs Cracked)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.942	0.165	1.291	0.307	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	4.91	3.48	1.05	70.83	2.57, 7.25
0.078	2	3.50	2.12	1.50	60.61	0.00, 22.56
0.31	3	3.00	2.65	1.53	88.19	0.00, 9.57
1.25	5	4.80	3.90	1.74	81.22	0.00, 9.64
5	4	2.00	1.63	0.82	81.65	0.00, 4.60

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	4.00	1.00	11.00	.	.
0.078	3.50	2.00	5.00	71.30	28.70
0.31	2.00	1.00	6.00	61.11	38.89
1.25	5.00	1.00	11.00	97.78	2.22
5	2.00	0.00	4.00	40.74	59.26

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.76	0.564

Dunnett - testing each trt mean signif. greater than control
Williams - test assumes dose-response relationship, testing positive trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	4.91	.	4.08	.	0.978	0.890	1.000	0.548	.
0.078	3.50	0.972	4.08	0.717	.	1.000	0.988	0.982	.
0.31	3.00	0.991	4.08	0.773	.	.	0.938	0.994	.
1.25	4.80	0.895	4.08	0.817	.	.	.	0.698	.
5	2.00	0.999	4.08	0.816	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE ENC_EL ((EL-EC)/EL (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.904	0.022	1.175	0.352	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	87.72	10.23	3.08	11.66	80.85, 94.59
0.078	2	91.46	6.06	4.28	6.62	37.05, 100.00
0.31	3	93.47	5.29	3.05	5.66	80.34, 100.00
1.25	5	89.27	8.33	3.73	9.33	78.92, 99.61
5	4	95.58	3.55	1.78	3.72	89.92, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	91.49	64.00	97.14	.	.
0.078	91.46	87.18	95.74	104.26	-4.26
0.31	95.35	87.50	97.56	106.55	-6.55
1.25	89.36	76.09	97.92	101.76	-1.76
5	95.50	91.30	100.00	108.95	-8.95

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.77	0.560

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	87.72	.	90.28	.	0.978	0.836	0.997	0.528	.
0.078	91.46	0.973	90.28	0.737	.	0.999	0.998	0.980	.
0.31	93.47	0.994	90.28	0.794	.	.	0.960	0.997	.
1.25	89.27	0.947	90.28	0.840	.	.	.	0.803	.
5	95.58	0.999	90.28	0.838	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE VE_ES (ViableEmbryo/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.957	0.666	1.482	0.286	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	85.72	13.40	5.47	15.63	71.65, 99.78
0.078	2	89.29	15.15	10.71	16.97	0.00, 100.00
0.31	3	72.79	26.21	15.13	36.01	7.68, 100.00
1.25	1	79.17	.	.	.	. , .
5	2	92.79	4.96	3.51	5.34	48.25, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	87.82	62.50	100.00	.	.
0.078	89.29	78.57	100.00	104.16	-4.16
0.31	77.78	44.44	96.15	84.92	15.08
1.25	79.17	79.17	79.17	92.36	7.64
5	92.79	89.29	96.30	108.25	-8.25

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	9	0.56	0.698

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	85.72	.	86.61	.	0.999	0.807	0.996	0.983	.
0.078	89.29	0.933	86.61	0.610	.	0.813	0.986	0.999	.
0.31	72.79	0.415	80.52	0.426	.	.	0.997	0.694	.
1.25	79.17	0.754	80.52	0.509	.	.	.	0.959	.
5	92.79	0.966	80.52	0.477	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE LE_VE (LiveEmbryo/ViableEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.909	0.150	1.136	0.399	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	91.80	9.96	4.07	10.85	81.34, 100.00
0.078	2	90.80	6.28	4.44	6.91	34.42, 100.00
0.31	3	90.87	9.55	5.51	10.51	67.15, 100.00
1.25	1	78.95	.	.	.	. , .
5	2	100.00	0.00	0.00	0.00	. , .

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	94.55	73.68	100.00	.	.
0.078	90.80	86.36	95.24	98.91	1.09
0.31	91.67	80.95	100.00	98.99	1.01
1.25	78.95	78.95	78.95	86.00	14.00
5	100.00	100.00	100.00	108.93	-8.93

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	9	0.95	0.477

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	91.80	.	91.80	.	1.000	1.000	0.680	0.791	.
0.078	90.80	0.837	91.65	0.575	.	1.000	0.811	0.836	.
0.31	90.87	0.834	91.65	0.607	.	.	0.775	0.793	.
1.25	78.95	0.314	91.65	0.630	.	.	.	0.370	.
5	100.00	0.994	91.65	0.639	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE NH_ES (NumberHatched/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.978	0.961	3.134	0.071	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	68.91	16.48	6.73	23.92	51.62, 86.21
0.078	2	79.17	15.99	11.31	20.20	0.00, 100.00
0.31	3	65.38	28.21	16.29	43.14	0.00, 100.00
1.25	1	45.83	.	.	.	. , .
5	2	85.52	4.77	3.37	5.58	42.66, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	69.55	50.00	86.21	.	.
0.078	79.17	67.86	90.48	114.88	-14.88
0.31	59.26	40.74	96.15	94.88	5.12
1.25	45.83	45.83	45.83	66.51	33.49
5	85.52	82.14	88.89	124.09	-24.09

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	9	0.91	0.499

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	68.91	.	71.48	.	0.960	0.999	0.789	0.815	.
0.078	79.17	0.977	71.48	0.651	.	0.925	0.622	0.997	.
0.31	65.38	0.793	68.84	0.615	.	.	0.892	0.770	.
1.25	45.83	0.398	68.84	0.635	.	.	.	0.473	.
5	85.52	0.993	68.84	0.646	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE NH_LE (NumberHatched/LiveEmbryo (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.893	0.090	2.483	0.118	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	87.55	11.47	4.68	13.10	75.51, 99.59
0.078	2	97.50	3.54	2.50	3.63	65.73, 100.00
0.31	3	98.04	3.40	1.96	3.46	89.60, 100.00
1.25	1	73.33	.	.	.	. , .
5	2	92.15	0.22	0.15	0.24	90.20, 94.11

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	92.13	68.18	100.00	.	.
0.078	97.50	95.00	100.00	111.37	-11.37
0.31	100.00	94.12	100.00	111.98	-11.98
1.25	73.33	73.33	73.33	83.76	16.24
5	92.15	92.00	92.31	105.26	-5.26

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	9	2.01	0.177

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	87.55	.	92.22	.	0.649	0.484	0.587	0.964	.
0.078	97.50	0.997	92.22	0.816	.	1.000	0.245	0.970	.
0.31	98.04	0.999	92.22	0.870	.	.	0.190	0.943	.
1.25	73.33	0.253	85.88	0.559	.	.	.	0.453	.
5	92.15	0.976	85.88	0.544	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE HS_ES (HatchlingSurvival/EggsSet (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.975	0.939	2.395	0.127	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	61.93	17.48	7.13	28.22	43.59, 80.27
0.078	2	74.40	9.26	6.55	12.45	0.00, 100.00
0.31	3	62.87	26.55	15.33	42.23	0.00, 100.00
1.25	1	45.83	.	.	.	. , .
5	2	79.96	3.09	2.18	3.86	52.23, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	64.16	37.50	80.00	.	.
0.078	74.40	67.86	80.95	120.15	-20.15
0.31	55.56	40.74	92.31	101.52	-1.52
1.25	45.83	45.83	45.83	74.01	25.99
5	79.96	77.78	82.14	129.12	-29.12

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	9	0.79	0.562

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	61.93	.	65.34	.	0.914	1.000	0.921	0.750	.
0.078	74.40	0.986	65.34	0.675	.	0.954	0.714	0.998	.
0.31	62.87	0.895	65.34	0.723	.	.	0.923	0.840	.
1.25	45.83	0.547	65.34	0.707	.	.	.	0.577	.
5	79.96	0.995	65.34	0.741	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE HS_NH (HatchlingSurvival/NumberHatched (%))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.975	0.931	1.993	0.179	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	6	89.25	10.04	4.10	11.25	78.71, 99.78
0.078	2	94.74	7.44	5.26	7.86	27.86, 100.00
0.31	3	96.58	3.17	1.83	3.28	88.72, 100.00
1.25	1	100.00	.	.	.	. , .
5	2	93.75	8.84	6.25	9.43	14.34, 100.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	89.33	75.00	100.00	.	.
0.078	94.74	89.47	100.00	106.15	-6.15
0.31	96.00	93.75	100.00	108.22	-8.22
1.25	100.00	100.00	100.00	112.05	-12.05
5	93.75	87.50	100.00	105.04	-5.04

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	9	0.61	0.664

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	89.25	.	93.01	.	0.928	0.744	0.770	0.963	.
0.078	94.74	0.984	93.01	0.783	.	0.999	0.985	1.000	.
0.31	96.58	0.995	93.01	0.838	.	.	0.996	0.996	.
1.25	100.00	0.995	93.01	0.792	.	.	.	0.972	.
5	93.75	0.976	93.01	0.842	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE THICK (Eggshell thickness)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.969	0.599	0.404	0.803	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	0.21	0.01	0.00	5.98	0.20, 0.22
0.078	2	0.20	0.01	0.01	4.95	0.11, 0.29
0.31	3	0.21	0.02	0.01	9.77	0.16, 0.27
1.25	5	0.21	0.02	0.01	7.26	0.19, 0.23
5	4	0.21	0.01	0.01	6.53	0.19, 0.23

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.21	0.19	0.23	.	.
0.078	0.20	0.19	0.21	95.16	4.84
0.31	0.21	0.20	0.24	101.51	-1.51
1.25	0.22	0.19	0.23	101.35	-1.35
5	0.22	0.19	0.22	100.04	-0.04

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	21	0.34	0.846

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.21	.	0.21	.	0.879	0.997	0.995	1.000	.
0.078	0.20	0.483	0.21	0.589	.	0.839	0.807	0.917	.
0.31	0.21	0.951	0.21	0.625	.	.	1.000	0.998	.
1.25	0.21	0.955	0.21	0.645	.	.	.	0.998	.
5	0.21	0.885	0.21	0.653	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE HATWT (Hatchling Weight)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.957	0.643	0.914	0.492	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	8.53	0.56	0.21	6.55	8.01, 9.05
0.078	2	8.56	0.82	0.58	9.58	1.19, 15.93
0.31	3	8.80	0.92	0.53	10.43	6.52, 11.08
1.25	1	8.51	.	.	.	. , .
5	2	8.20	0.31	0.22	3.79	5.40, 11.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	8.60	7.70	9.50	.	.
0.078	8.56	7.98	9.14	100.37	-0.37
0.31	8.72	7.93	9.76	103.22	-3.22
1.25	8.51	8.51	8.51	99.78	0.22
5	8.20	7.98	8.42	96.15	3.85

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	10	0.26	0.900

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	8.53	.	8.60	.	1.000	0.971	1.000	0.968	.
0.078	8.56	0.899	8.60	0.641	.	0.993	1.000	0.980	.
0.31	8.80	0.976	8.60	0.685	.	.	0.995	0.848	.
1.25	8.51	0.877	8.51	0.625	.	.	.	0.995	.
5	8.20	0.646	8.20	0.369	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE SURVWT (Survivor Wt (d14))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.950	0.520	4.859	0.019	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	106.53	2.53	0.96	2.38	104.19, 108.88
0.078	2	112.93	8.33	5.89	7.38	38.09, 187.77
0.31	3	113.59	5.27	3.04	4.64	100.50, 126.68
1.25	1	111.01	.	.	.	. , .
5	2	105.97	5.65	4.00	5.33	55.20, 156.73

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	107.13	102.46	109.82	.	.
0.078	112.93	107.04	118.82	106.00	-6.00
0.31	115.34	107.67	117.76	106.62	-6.62
1.25	111.01	111.01	111.01	104.20	-4.20
5	105.97	101.97	109.96	99.47	0.53

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	4.67	0.323

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	107.13	.	.
0.078	112.93	1.000	0.810
0.31	115.34	1.000	0.950
1.25	111.01	1.000	0.966
5	105.97	1.000	0.842

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FOOD (Food Consumption)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.984	0.922	2.612	0.060	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	33.13	1.90	0.57	5.73	31.86, 34.41
0.078	4	26.03	4.14	2.07	15.89	19.44, 32.61
0.31	6	28.67	5.40	2.20	18.84	23.00, 34.33
1.25	5	34.06	3.18	1.42	9.35	30.11, 38.01
5	4	30.85	3.77	1.88	12.22	24.85, 36.85

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.83	30.57	36.28	.	.
0.078	27.40	20.00	29.30	78.55	21.45
0.31	26.90	23.30	35.70	86.53	13.47
1.25	34.70	29.00	37.50	102.80	-2.80
5	30.10	27.30	35.90	93.12	6.88

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	25	4.50	0.007

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	33.13	.	33.13	.	0.017	0.129	0.988	0.806	.
0.078	26.03	0.004	29.99	0.084	.	0.778	0.019	0.334	.
0.31	28.67	0.037	29.99	0.058	.	.	0.122	0.874	.
1.25	34.06	0.955	29.99	0.073	.	.	.	0.666	.
5	30.85	0.385	29.99	0.094	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	<lowest dose	0.078
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINM (Male wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.888	0.025	1.469	0.261	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	214.59	13.46	5.09	6.27	202.14, 227.04
0.078	4	205.45	29.72	14.86	14.47	158.15, 252.75
0.31	6	219.43	14.77	6.03	6.73	203.94, 234.93
1.25	1	189.00	.	.	.	. , .
5	2	210.00	20.22	14.30	9.63	28.30, 391.70

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	216.80	193.50	229.70	.	.
0.078	217.25	161.30	226.00	95.74	4.26
0.31	222.70	191.90	235.20	102.26	-2.26
1.25	189.00	189.00	189.00	88.08	11.92
5	210.00	195.70	224.30	97.86	2.14

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	0.78	0.558

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	214.59	.	214.59	.	0.933	0.989	0.706	0.998	.
0.078	205.45	0.547	213.84	0.556	.	0.773	0.930	0.998	.
0.31	219.43	0.957	213.84	0.586	.	.	0.573	0.970	.
1.25	189.00	0.316	203.00	0.377	.	.	.	0.886	.
5	210.00	0.764	203.00	0.305	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE WTGAINF (Female wt gain)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.962	0.442	1.201	0.340	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	261.68	20.39	5.89	7.79	248.72, 274.63
0.078	2	239.65	5.59	3.95	2.33	189.46, 289.84
0.31	3	264.27	16.27	9.39	6.16	223.85, 304.69
1.25	5	271.74	14.21	6.36	5.23	254.09, 289.39
5	4	245.10	19.35	9.68	7.90	214.31, 275.89

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	262.90	232.20	289.30	.	.
0.078	239.65	235.70	243.60	91.58	8.42
0.31	270.50	245.80	276.50	100.99	-0.99
1.25	270.70	255.10	290.90	103.85	-3.85
5	242.60	225.50	269.70	93.67	6.33

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	21	1.85	0.157

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	261.68	.	262.31	.	0.530	0.999	0.838	0.534	.
0.078	239.65	0.211	262.31	0.603	.	0.592	0.260	0.997	.
0.31	264.27	0.931	262.31	0.641	.	.	0.980	0.654	.
1.25	271.74	0.994	262.31	0.665	.	.	.	0.231	.
5	245.10	0.214	245.10	0.086	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE EGGLAY (Days to onset of egg laying)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.922	0.051	1.510	0.235	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	39.58	2.97	0.86	7.50	37.70, 41.47
0.078	2	41.00	7.07	5.00	17.25	0.00, 104.53
0.31	3	40.33	2.31	1.33	5.73	34.60, 46.07
1.25	5	40.80	3.49	1.56	8.56	36.46, 45.14
5	4	41.75	2.22	1.11	5.31	38.22, 45.28

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	39.00	36.00	47.00	.	.
0.078	41.00	36.00	46.00	103.58	-3.58
0.31	39.00	39.00	43.00	101.89	-1.89
1.25	39.00	39.00	47.00	103.07	-3.07
5	42.00	39.00	44.00	105.47	-5.47

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	21	0.40	0.808

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	39.58	.	40.35	.	0.978	0.996	0.953	0.775	.
0.078	41.00	0.974	40.35	0.707	.	0.999	1.000	0.999	.
0.31	40.33	0.952	40.35	0.762	.	.	1.000	0.978	.
1.25	40.80	0.983	40.35	0.806	.	.	.	0.992	.
5	41.75	0.996	40.35	0.806	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBL (Tibial length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.910	0.031	0.129	0.970	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	53.70	1.92	0.58	3.57	52.41, 54.98
0.078	2	51.44	2.31	1.63	4.48	30.73, 72.15
0.31	3	54.81	2.10	1.21	3.84	49.59, 60.04
1.25	5	56.41	2.23	1.00	3.96	53.63, 59.18
5	4	53.50	1.61	0.80	3.00	50.94, 56.05

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	53.89	50.62	56.14	.	.
0.078	51.44	49.81	53.07	95.80	4.20
0.31	55.78	52.40	56.26	102.08	-2.08
1.25	57.52	52.49	57.82	105.05	-5.05
5	53.84	51.25	55.06	99.62	0.38

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	2.89	0.049

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	53.70	.	54.29	.	0.586	0.906	0.122	1.000	.
0.078	51.44	0.242	54.29	0.736	.	0.367	0.050	0.753	.
0.31	54.81	0.989	54.29	0.793	.	.	0.804	0.904	.
1.25	56.41	1.000	54.29	0.839	.	.	.	0.224	.
5	53.50	0.826	53.50	0.570	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTARL (Tarsal length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.955	0.307	1.146	0.362	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	34.71	2.38	0.69	6.86	33.20, 36.22
0.078	2	32.06	0.91	0.65	2.85	23.86, 40.25
0.31	3	37.43	0.70	0.41	1.88	35.69, 39.18
1.25	5	36.48	3.52	1.57	9.65	32.11, 40.85
5	4	32.44	2.53	1.26	7.79	28.42, 36.47

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	34.42	31.14	40.18	.	.
0.078	32.06	31.41	32.70	92.35	7.65
0.31	37.68	36.64	37.98	107.85	-7.85
1.25	36.85	32.34	41.70	105.09	-5.09
5	32.33	29.65	35.46	93.47	6.53

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	21	2.85	0.049

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	34.71	.	35.24	.	0.645	0.468	0.683	0.537	.
0.078	32.06	0.280	35.24	0.696	.	0.171	0.256	1.000	.
0.31	37.43	1.000	35.24	0.749	.	.	0.984	0.107	.
1.25	36.48	0.998	35.24	0.791	.	.	.	0.157	.
5	32.44	0.215	32.44	0.087	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBD (Tibial diameter of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.976	0.794	2.614	0.066	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	2.98	0.30	0.09	10.16	2.78, 3.19
0.078	2	3.74	0.35	0.25	9.45	0.56, 6.92
0.31	3	3.55	0.91	0.53	25.73	1.28, 5.82
1.25	5	3.31	0.47	0.21	14.22	2.73, 3.90
5	4	3.15	0.46	0.23	14.55	2.42, 3.88

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	2.96	2.46	3.67	.	.
0.078	3.74	3.49	3.99	125.31	-25.31
0.31	3.15	2.91	4.60	119.06	-19.06
1.25	3.37	2.58	3.86	111.04	-11.04
5	3.17	2.61	3.65	105.54	-5.54

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	1.82	0.164

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	2.98	.	3.22	.	0.244	0.350	0.678	0.971	.
0.078	3.74	1.000	3.22	0.821	.	0.991	0.801	0.586	.
0.31	3.55	1.000	3.22	0.880	.	.	0.951	0.780	.
1.25	3.31	0.998	3.22	0.923	.	.	.	0.983	.
5	3.15	0.976	3.15	0.866	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FTIBW (Tibial weight of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.973	0.710	4.763	0.007	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	1.11	0.09	0.03	8.46	1.05, 1.17
0.078	2	0.92	0.37	0.26	40.96	0.00, 4.28
0.31	3	1.23	0.05	0.03	3.73	1.12, 1.34
1.25	5	1.28	0.17	0.07	13.08	1.07, 1.49
5	4	1.20	0.12	0.06	9.67	1.02, 1.38

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.12	0.94	1.26	.	.
0.078	0.92	0.65	1.18	82.43	17.57
0.31	1.22	1.19	1.28	110.81	-10.81
1.25	1.22	1.14	1.56	115.50	-15.50
5	1.21	1.05	1.33	108.11	-8.11

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	8.66	0.070

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	1.12	.	.
0.078	0.92	1.000	0.346
0.31	1.22	1.000	0.940
1.25	1.22	1.000	0.993
5	1.21	1.000	0.993

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBL (Tibial length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.987	0.990	2.099	0.132	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	53.09	2.54	0.96	4.78	50.75, 55.44
0.078	4	52.84	2.85	1.42	5.39	48.30, 57.37
0.31	6	53.53	1.50	0.61	2.81	51.95, 55.10
1.25	1	51.51	.	.	.	. , .
5	2	55.48	0.22	0.16	0.40	53.51, 57.44

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	53.48	49.17	57.22	.	.
0.078	53.17	49.57	55.43	99.51	0.49
0.31	53.98	51.10	55.03	100.81	-0.81
1.25	51.51	51.51	51.51	97.02	2.98
5	55.48	55.32	55.63	104.48	-4.48

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	0.71	0.597

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	53.09	.	53.33	.	1.000	0.997	0.961	0.676	.
0.078	52.84	0.809	53.33	0.653	.	0.988	0.982	0.655	.
0.31	53.53	0.941	53.33	0.697	.	.	0.915	0.817	.
1.25	51.51	0.603	53.33	0.679	.	.	.	0.605	.
5	55.48	0.997	53.33	0.704	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTARL (Tarsal length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.978	0.906	1.094	0.395	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	32.66	1.58	0.60	4.84	31.20, 34.12
0.078	4	32.00	1.36	0.68	4.24	29.84, 34.16
0.31	6	32.34	2.24	0.91	6.91	29.99, 34.68
1.25	1	32.45	.	.	.	. , .
5	2	30.81	0.91	0.64	2.96	22.61, 39.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	32.99	30.08	34.28	.	.
0.078	31.79	30.62	33.82	98.00	2.00
0.31	32.65	29.56	35.57	99.02	0.98
1.25	32.45	32.45	32.45	99.37	0.63
5	30.81	30.16	31.45	94.33	5.67

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	0.46	0.766

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	32.66	.	32.66	.	0.974	0.997	1.000	0.687	.
0.078	32.00	0.638	32.23	0.417	.	0.998	0.999	0.930	.
0.31	32.34	0.756	32.23	0.423	.	.	1.000	0.820	.
1.25	32.45	0.835	32.23	0.534	.	.	.	0.937	.
5	30.81	0.303	30.81	0.139	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBD (Tibial diameter of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.944	0.284	1.324	0.306	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	2.99	0.26	0.10	8.64	2.75, 3.23
0.078	4	3.00	0.29	0.15	9.77	2.54, 3.47
0.31	6	3.36	0.49	0.20	14.44	2.85, 3.87
1.25	1	2.44	.	.	.	. , .
5	2	2.81	0.04	0.03	1.51	2.43, 3.19

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	3.00	2.64	3.38	.	.
0.078	2.94	2.74	3.40	100.37	-0.37
0.31	3.37	2.52	3.87	112.27	-12.27
1.25	2.44	2.44	2.44	81.57	18.43
5	2.81	2.78	2.84	93.94	6.06

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	2.22	0.115

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	2.99	.	3.12	.	1.000	0.366	0.593	0.965	.
0.078	3.00	0.881	3.12	0.805	.	0.534	0.615	0.967	.
0.31	3.36	1.000	3.12	0.856	.	.	0.161	0.349	.
1.25	2.44	0.244	2.69	0.283	.	.	.	0.906	.
5	2.81	0.612	2.69	0.198	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE MTIBW (Tibial weight of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.882	0.019	1.523	0.246	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.93	0.18	0.07	19.73	0.76, 1.10
0.078	4	0.96	0.16	0.08	16.67	0.70, 1.21
0.31	6	1.07	0.09	0.04	8.24	0.97, 1.16
1.25	1	1.04	.	.	.	. , .
5	2	1.03	0.06	0.04	5.49	0.52, 1.54

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.99	0.58	1.08	.	.
0.078	1.03	0.72	1.06	103.12	-3.12
0.31	1.06	0.96	1.17	114.69	-14.69
1.25	1.04	1.04	1.04	112.00	-12.00
5	1.03	0.99	1.07	110.92	-10.92

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	0.82	0.531

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.93	.	0.99	.	0.998	0.474	0.950	0.905	.
0.078	0.96	0.936	0.99	0.828	.	0.783	0.986	0.977	.
0.31	1.07	0.999	0.99	0.877	.	.	1.000	0.998	.
1.25	1.04	0.978	0.99	0.792	.	.	.	1.000	.
5	1.03	0.986	0.99	0.843	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE CLOACA (Cloacal area at necropsy (males))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.977	0.893	0.509	0.730	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	499.89	93.07	35.18	18.62	413.82, 585.97
0.078	4	459.41	72.39	36.19	15.76	344.23, 574.59
0.31	6	506.98	68.80	28.09	13.57	434.78, 579.18
1.25	1	333.20	.	.	.	. , .
5	2	538.65	93.96	66.44	17.44	0.00, 1382.89

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	512.68	360.85	636.68	.	.
0.078	453.29	378.81	552.24	91.90	8.10
0.31	500.75	397.49	603.19	101.42	-1.42
1.25	333.20	333.20	333.20	66.65	33.35
5	538.65	472.21	605.10	107.75	-7.75

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	1.33	0.305

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	499.89	.	499.89	.	0.929	1.000	0.355	0.974	.
0.078	459.41	0.542	487.95	0.483	.	0.892	0.648	0.794	.
0.31	506.98	0.906	487.95	0.501	.	.	0.326	0.989	.
1.25	333.20	0.124	470.17	0.483	.	.	.	0.289	.
5	538.65	0.969	470.17	0.441	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE FOAM (Age at first foam (days))

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.891	0.028	0.584	0.679	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	35.71	3.45	1.30	9.66	32.52, 38.91
0.078	4	39.00	2.45	1.22	6.28	35.10, 42.90
0.31	6	36.33	1.86	0.76	5.12	34.38, 38.29
1.25	1	38.00	.	.	.	. , .
5	2	40.00	1.41	1.00	3.54	27.29, 52.71

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	35.00	33.00	43.00	.	.
0.078	39.50	36.00	41.00	109.20	-9.20
0.31	36.00	34.00	39.00	101.73	-1.73
1.25	38.00	38.00	38.00	106.40	-6.40
5	40.00	39.00	41.00	112.00	-12.00

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	15	1.69	0.204

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	35.71	.	37.10	.	0.336	0.993	0.928	0.319	.
0.078	39.00	1.000	37.10	0.862	.	0.558	0.997	0.992	.
0.31	36.33	0.950	37.10	0.908	.	.	0.977	0.481	.
1.25	38.00	0.983	37.10	0.817	.	.	.	0.972	.
5	40.00	1.000	37.10	0.871	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMF (Female-type plumage length of females)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.902	0.020	1.382	0.276	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	11	65.53	10.93	3.30	16.68	58.18, 72.87
0.078	2	70.50	1.94	1.38	2.76	53.02, 87.97
0.31	3	69.99	14.16	8.17	20.23	34.82, 105.16
1.25	5	66.33	3.64	1.63	5.48	61.82, 70.85
5	4	65.57	3.41	1.70	5.20	60.15, 70.99

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	66.88	47.59	90.83	.	.
0.078	70.50	69.12	71.87	107.58	-7.58
0.31	71.71	55.05	83.21	106.81	-6.81
1.25	66.11	62.07	71.95	101.23	-1.23
5	65.71	61.51	69.34	100.06	-0.06

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	0.24	0.910

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	65.53	.	66.98	.	0.953	0.943	1.000	1.000	.
0.078	70.50	0.982	66.98	0.668	.	1.000	0.982	0.970	.
0.31	69.99	0.984	66.98	0.718	.	.	0.981	0.968	.
1.25	66.33	0.917	66.33	0.705	.	.	.	1.000	.
5	65.57	0.881	65.57	0.652	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE PLUMM (Female-type plumage length of males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.808	0.001	11.814	<.001	USE NON-PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	13.14	22.58	8.53	171.83	0.00, 34.02
0.078	4	0.00	0.00	0.00	.	. , .
0.31	6	0.00	0.00	0.00	.	. , .
1.25	1	0.00	.	.	.	. , .
5	2	21.40	30.26	21.40	141.42	0.00, 293.31

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	50.30	.	.
0.078	0.00	0.00	0.00	0.00	100.00
0.31	0.00	0.00	0.00	0.00	100.00
1.25	0.00	0.00	0.00	0.00	100.00
5	21.40	0.00	42.80	162.84	-62.84

****

NON-PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Kruskal-Wallis test - equality among treatment groups

Degrees of Freedom	TestStat	P-value
4	4.59	0.332

MannWhit(Bon) - testing each trt median signif. less than control
Jonckheere - test assumes dose-response relationship, testing negative trend

Level	Median	MannWhit(Bon adjust)p-value	Jonckheere p-value
0 ppm	0.00	.	.
0.078	0.00	1.000	0.131
0.31	0.00	1.000	0.056
1.25	0.00	1.000	0.052
5	21.40	1.000	0.330

SUMMARY	NOEC	LOEC
MannWhit (Bonf adjust)	5	>highest dose
Jonckheere	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWF (Adrenal to Body Weight ratio in female)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.942	0.164	1.031	0.416	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	12	0.00	0.00	0.00	51.26	0.00, 0.00
0.078	4	0.00	0.00	0.00	22.46	0.00, 0.00
0.31	6	0.00	0.00	0.00	48.62	0.00, 0.00
1.25	1	0.00	.	.	.	. , .
5	2	0.00	0.00	0.00	42.74	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	150.72	-50.72
0.31	0.00	0.00	0.00	181.94	-81.94
1.25	0.00	0.00	0.00	78.27	21.73
5	0.00	0.00	0.00	110.80	-10.80

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	20	2.17	0.109

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.606	0.090	0.997	0.999	.
0.078	0.00	0.999	0.00	0.882	.	0.929	0.821	0.939	.
0.31	0.00	1.000	0.00	0.929	.	.	0.525	0.613	.
1.25	0.00	0.778	0.00	0.636	.	.	.	0.992	.
5	0.00	0.940	0.00	0.648	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE ADRBWM (Adrenal to Body Weight ratio in males)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.965	0.627	2.702	0.068	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	0.00	0.00	0.00	55.60	0.00, 0.00
0.078	2	0.00	0.00	0.00	25.44	0.00, 0.00
0.31	3	0.00	0.00	0.00	38.70	0.00, 0.00
1.25	5	0.00	0.00	0.00	62.67	0.00, 0.00
5	4	0.00	0.00	0.00	56.74	0.00, 0.00

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	0.00	0.00	0.00	.	.
0.078	0.00	0.00	0.00	124.39	-24.39
0.31	0.00	0.00	0.00	38.43	61.57
1.25	0.00	0.00	0.00	73.39	26.61
5	0.00	0.00	0.00	41.13	58.87

****

PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

Numerator df	Denominator df	F-stat	P-value
4	16	2.37	0.096

Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	0.00	.	0.00	.	0.953	0.285	0.829	0.242	.
0.078	0.00	0.973	0.00	0.648	.	0.240	0.633	0.223	.
0.31	0.00	0.093	0.00	0.128	.	.	0.802	1.000	.
1.25	0.00	0.407	0.00	0.088	.	.	.	0.800	.
5	0.00	0.077	0.00	0.029	.	.	.	.	.

SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	1.25	5

Japanese quail 2-generation dosing study, P1BF1B
16:50 Wednesday, October 26, 2005
ANALYSIS RESULTS FOR VARIABLE SEXRC (Sex ratio of F2 chicks)

TESTS OF ASSUMPTIONS FOR PARAMETRIC ANALYSIS
Shapiro-Wilks test for Normality of Residuals -- alpha-level=0.01
Levenes test for homogeneity of variance(absolute residuals) -- alpha-level=0.05
Use parametric analyses if neither test rejected, otherwise non-parametric analyses.

Shapiro-Wilks Test Stat	Shapiro-Wilks P-value	Levenes Test Stat	Levenes P-value	Conclusion
0.967	0.804	0.826	0.538	USE PARAMETRIC TESTS

****

BASIC SUMMARY STATISTICS

Level	N	Mean	StdDev	StdErr	Coef of Var	95% Conf.Interval
0 ppm	7	1.22	0.53	0.20	43.55	0.73, 1.71
0.078	2	0.91	0.69	0.49	76.15	0.00, 7.14
0.31	3	1.75	0.75	0.43	42.86	0.00, 3.61
1.25	1	0.80	.	.	.	. , .
5	2	0.66	0.23	0.16	34.28	0.00, 2.69

Level	Median	Min	Max	%of Control(means)	%Reduction(means)
0 ppm	1.00	0.67	2.20	.	.
0.078	0.91	0.42	1.40	74.79	25.21
0.31	1.75	1.00	2.50	143.83	-43.83
1.25	0.80	0.80	0.80	65.75	34.25
5	0.66	0.50	0.82	54.24	45.76

****

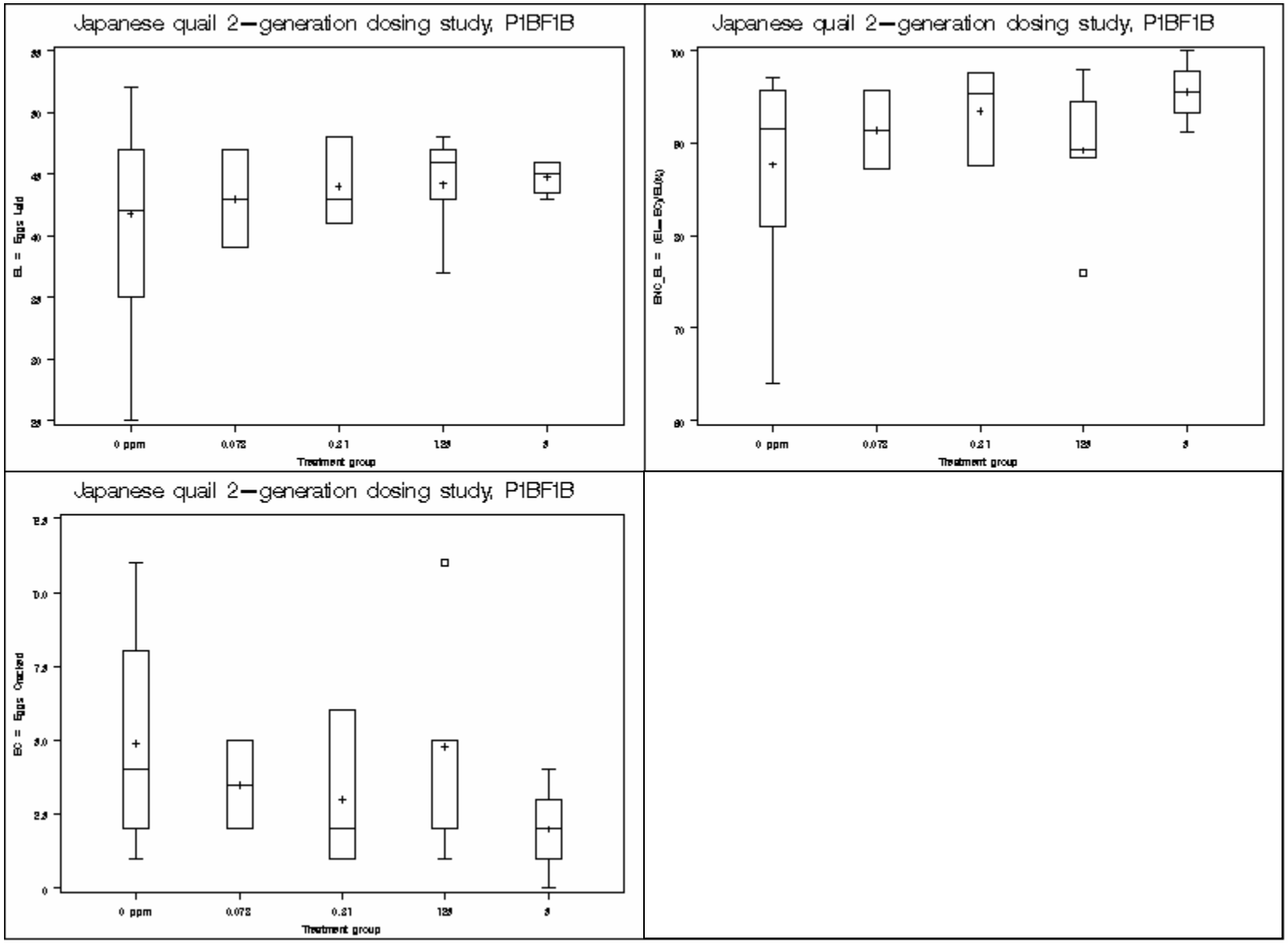
PARAMETRIC ANALYSES - use alpha-level=0.05 for all tests
Analysis of Variance (ANOVA) - overall F-test

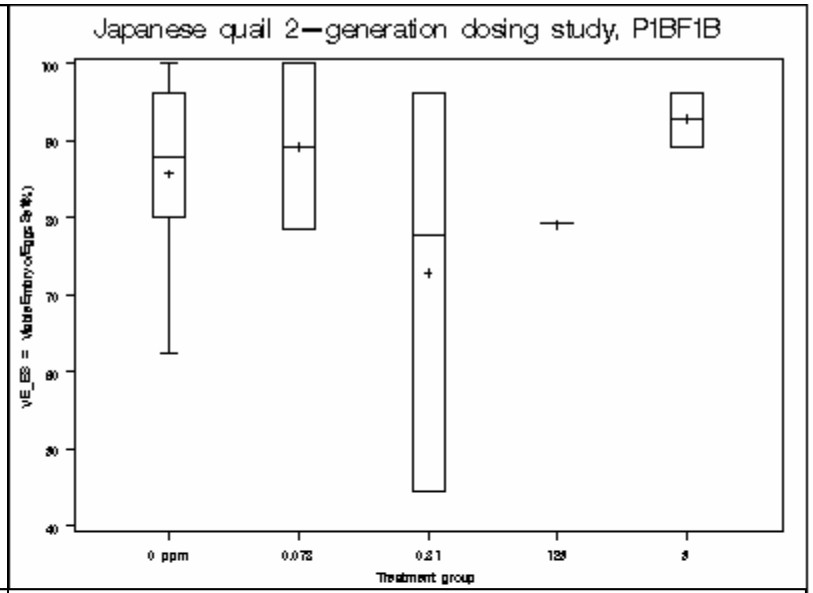
Numerator df	Denominator df	F-stat	P-value
4	10	1.36	0.315

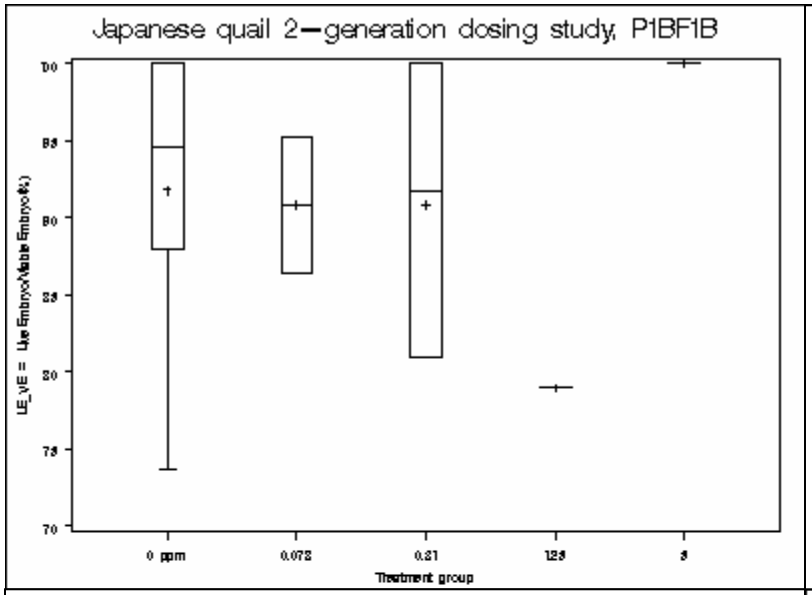
Dunnett - testing each trt mean signif. less than control
Williams - test assumes dose-response relationship, testing negative trend
Tukey - two-sided tests, all possible comparisons, not used for NOEC or LOEC

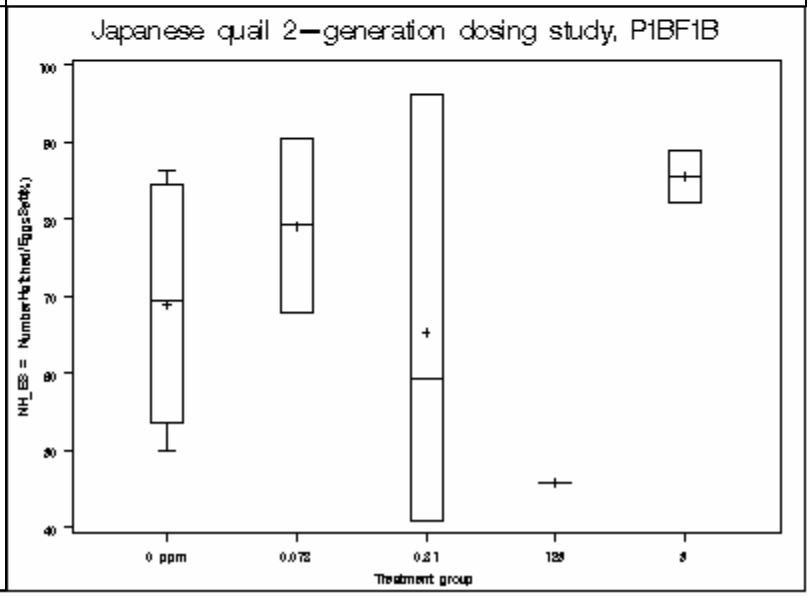
Level	Mean	Dunnett p-value	Isotonic mean	Williams p-value	Tukey p-values Dose1	Dose2	Dose3	Dose4	Dose5
0 ppm	1.22	.	1.30	.	0.960	0.677	0.958	0.751	.
0.078	0.91	0.627	1.30	0.656	.	0.533	1.000	0.992	.
0.31	1.75	0.997	1.30	0.702	.	.	0.628	0.305	.
1.25	0.80	0.621	0.80	0.341	.	.	.	1.000	.
5	0.66	0.370	0.66	0.172	.	.	.	.	.

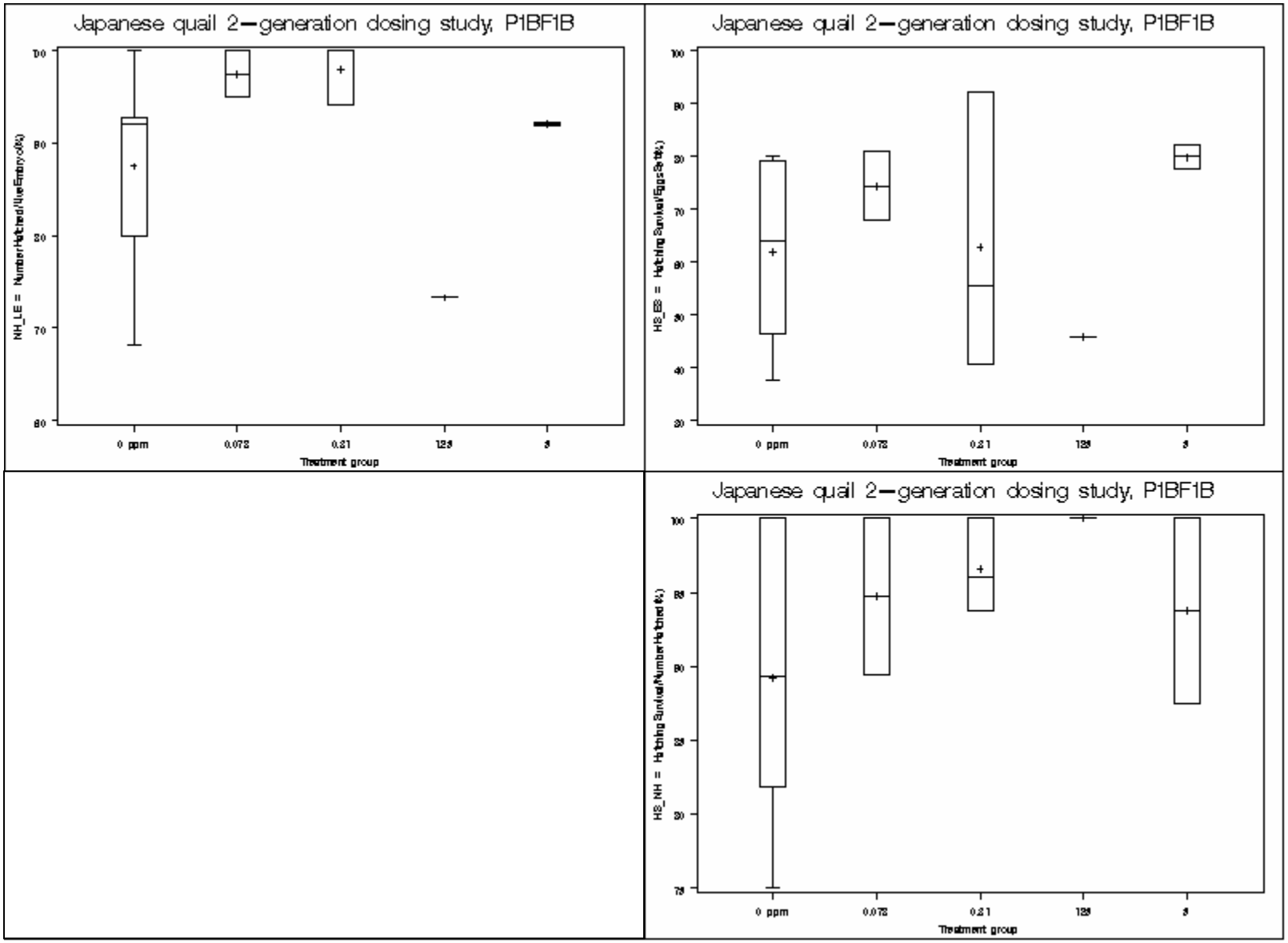
SUMMARY	NOEC	LOEC
Dunnett	5	>highest dose
Williams	5	>highest dose

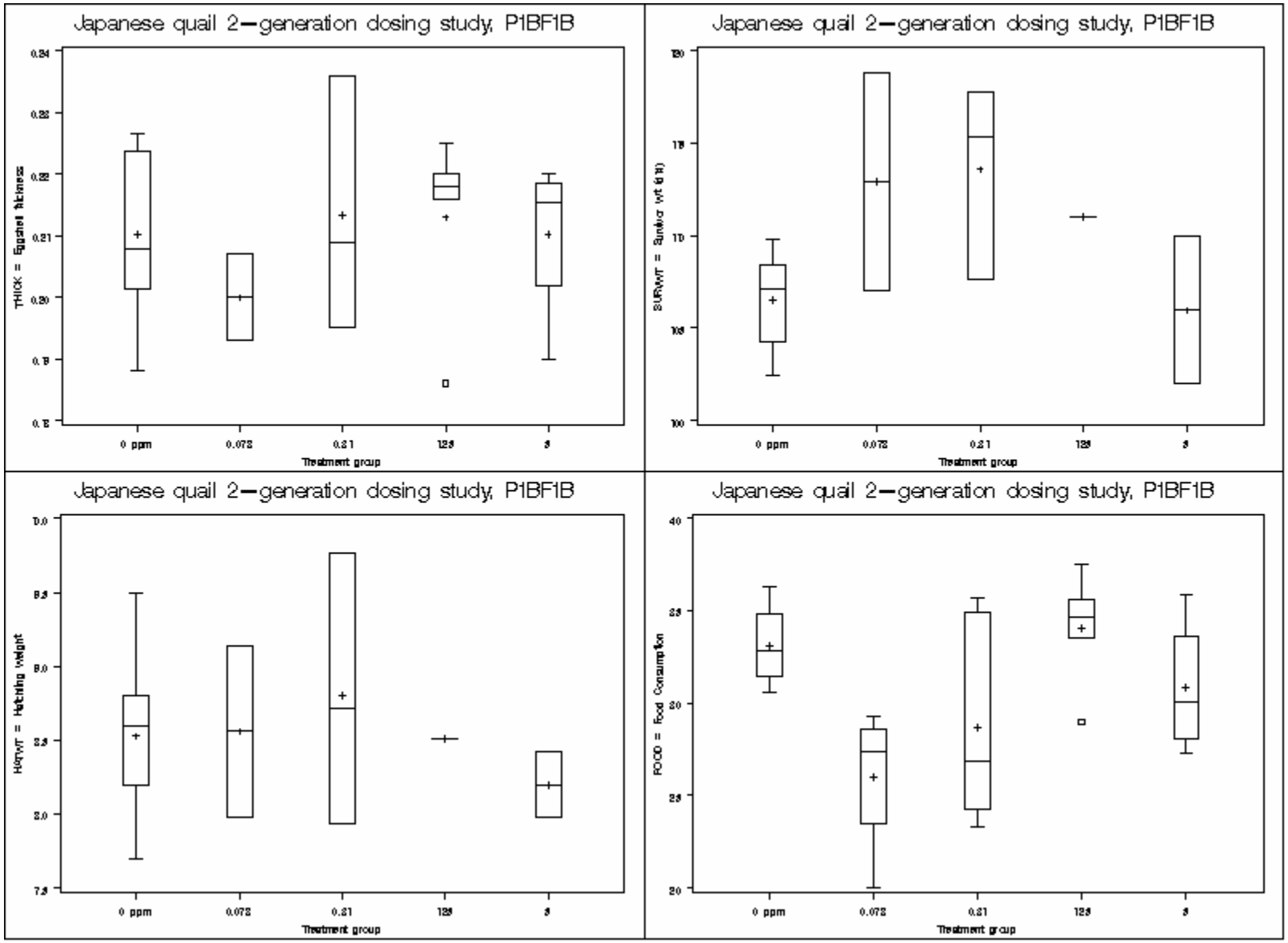

Japanese quail 2−generation dosing study, P1BF1B
EL = Eggs Laid
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
ENC_EL = (EL− EC)/EL(%)
0 ppm
0.072
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
EC = Eggs Cracked
0 ppm
0.072
0.21
128
5
Treatment group

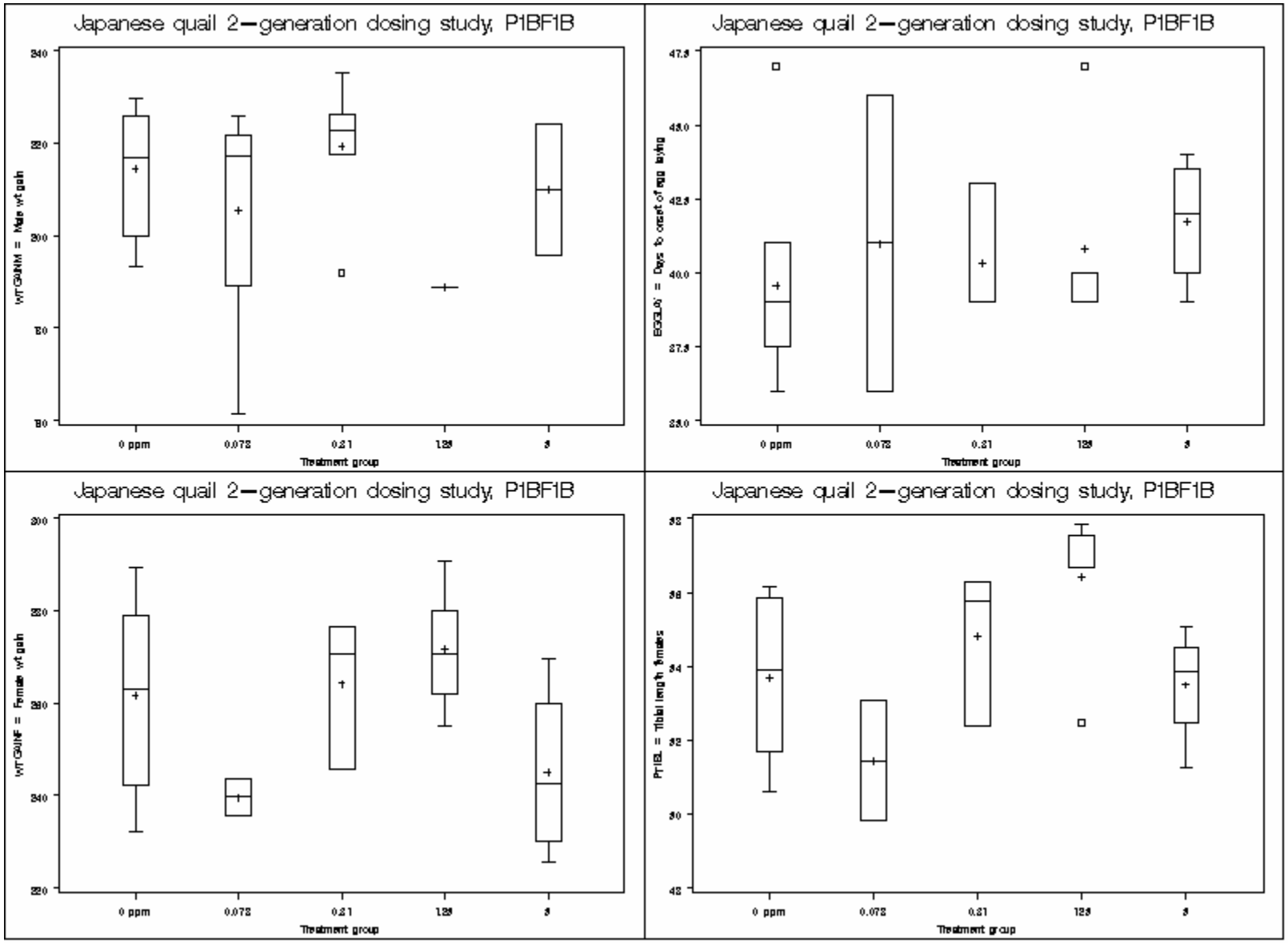

Japanese quail 2−generation dosing study, P1BF1B
100
90
80
70
60
50
40
0 ppm
0.073
0.21
128
Treatment group

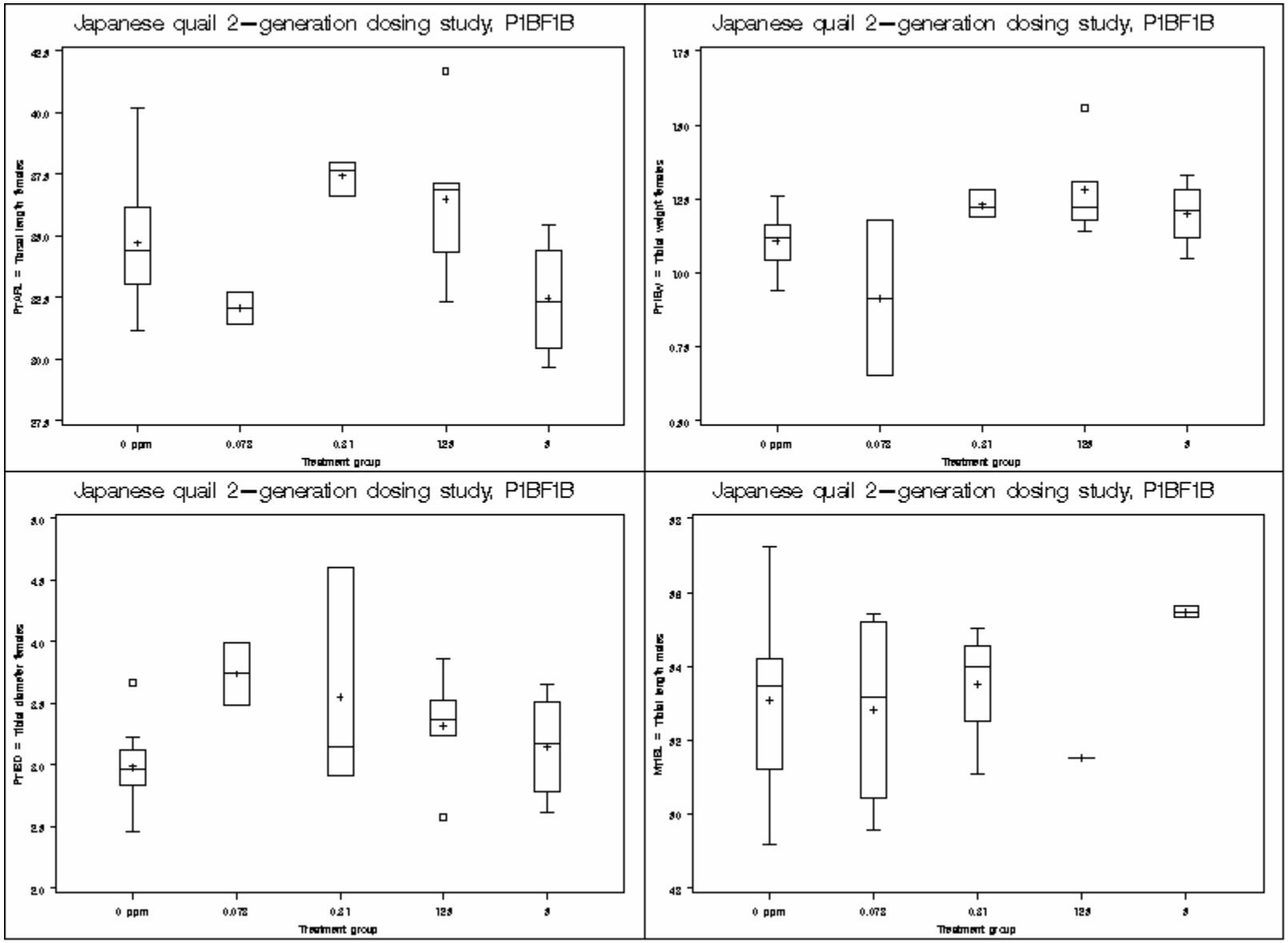

Japanese quail 2−generation dosing study, P1BF1B
LE_VE = Live Embryo/Viable Embryo(%)
100
90
80
70
0 ppm
0.073
0.21
1.25
5
Treatment group

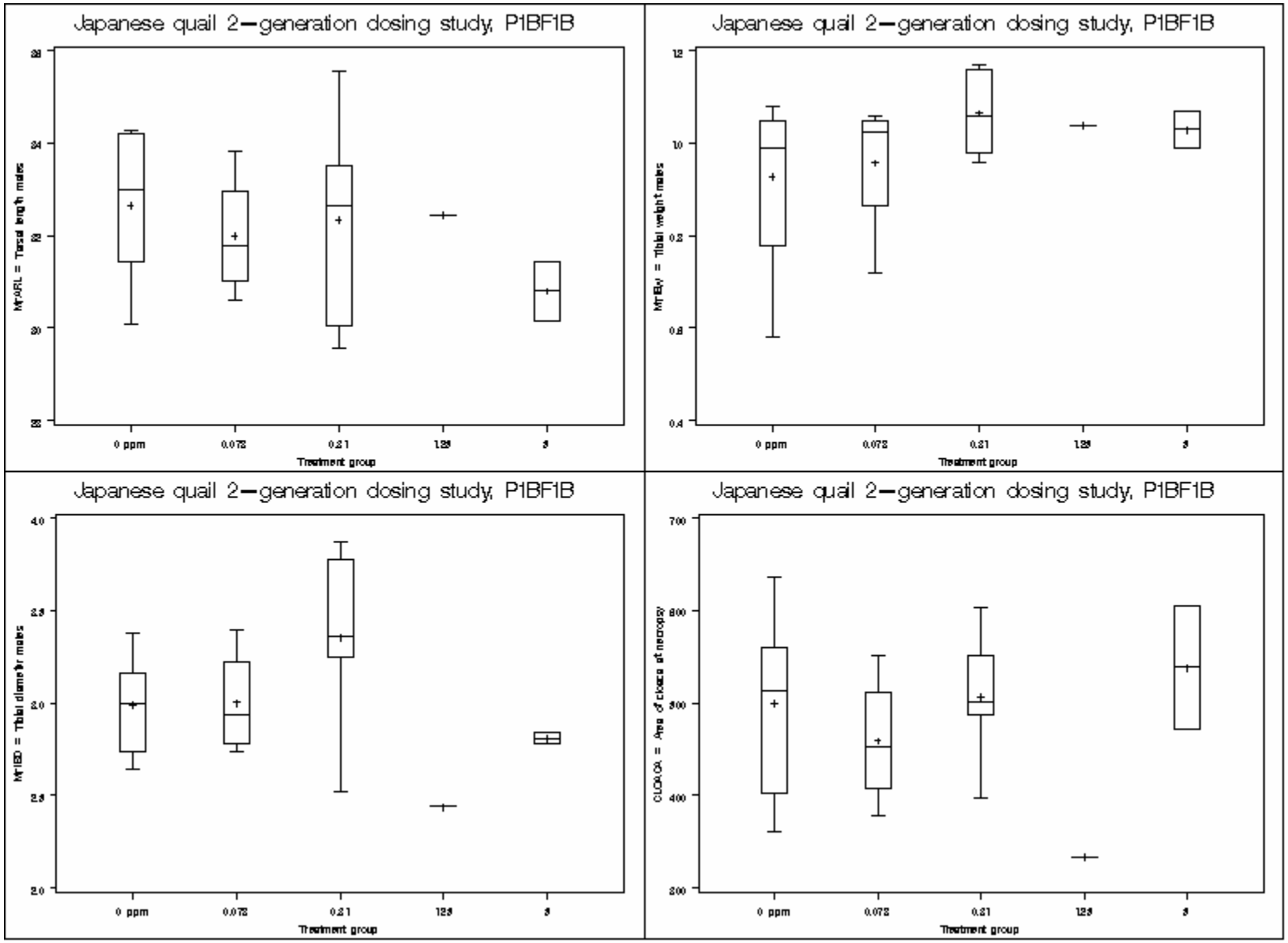

Japanese quail 2−generation dosing study, P1BF1B
NH_ES = Number Hatched/Eggs Set(%)
100
90
80
70
60
50
40
0 ppm
0.073
0.21
1.25
5
Treatment group

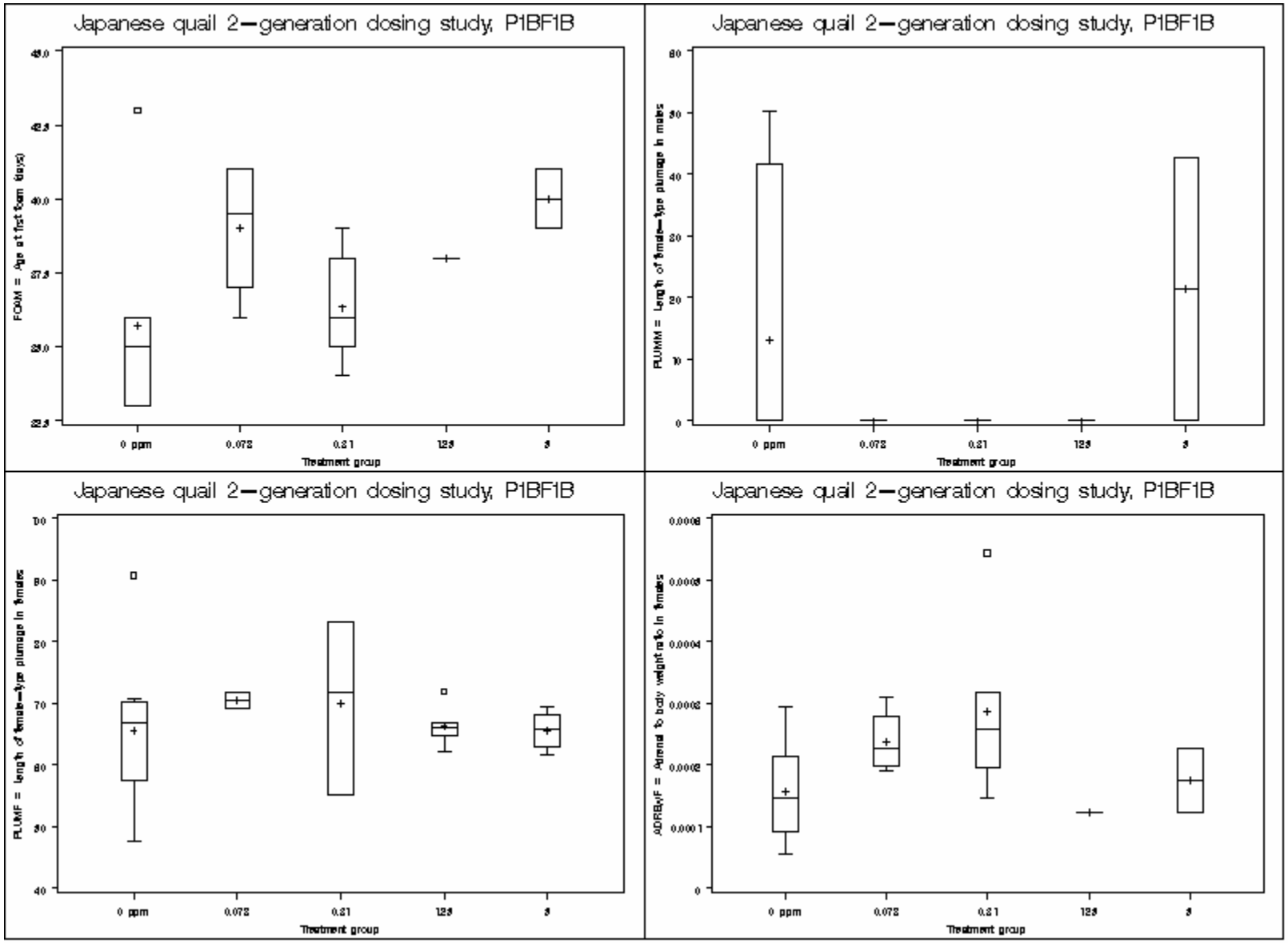

Japanese quail 2−generation dosing study, P1BF1B
NH_LE = Number Hatched/Live Embryos(%)
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
HS_EB = Hatching Survival/Eggs Set(%)
0 ppm
0.073
0.21
128
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
HS_NH = Hatching Survival/Number Hatched(%)
0 ppm
0.073
0.21
128
5
Treatment group

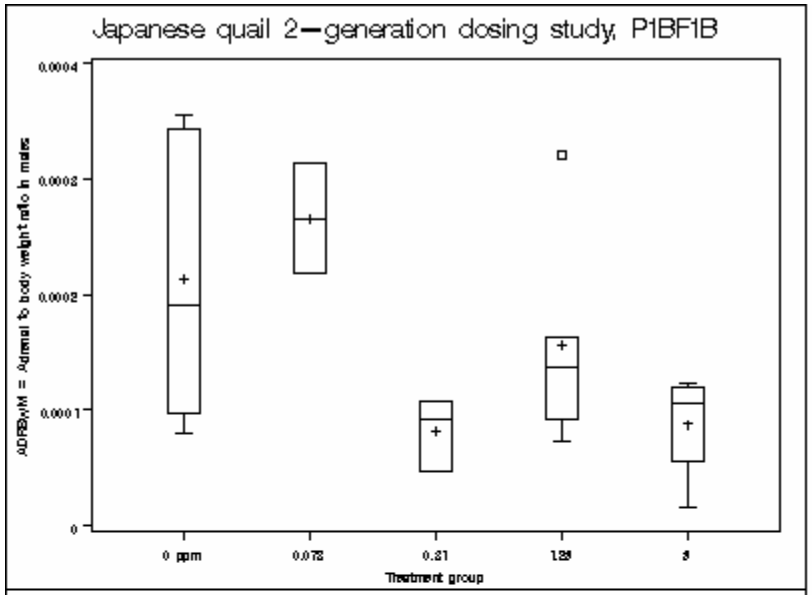

Japanese quail 2−generation dosing study, P1BF1B
THICK = Eggshell thickness
0.24
0.23
0.22
0.21
0.20
0.19
0.18
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
SURVWT = Survivor wt (g)
120
110
100
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
HATWT = Hatching weight
9.0
8.5
8.0
7.5
0 ppm
0.072
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
FOOD = Food Consumption
40
35
30
25
20
0 ppm
0.072
0.21
125
5
Treatment group

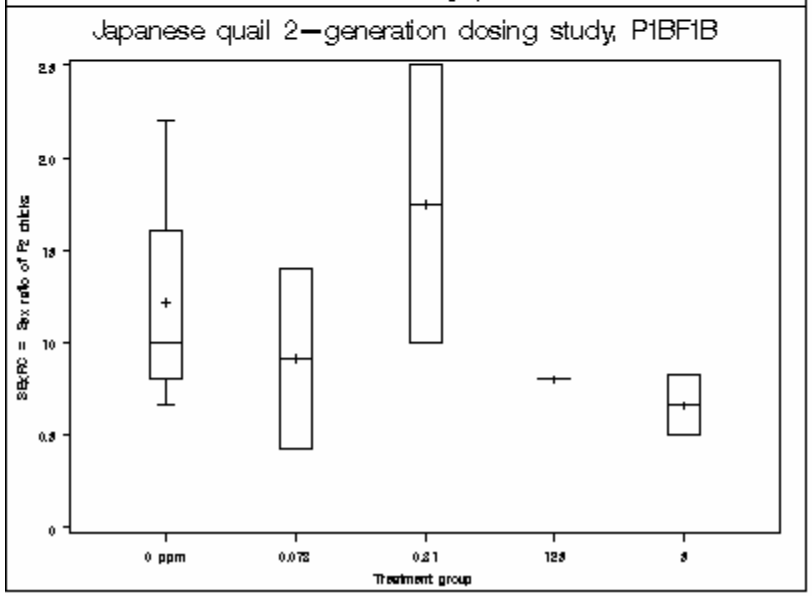

Japanese quail 2−generation dosing study, P1BF1B
WTGAINM = Male wt gain
Treatment group
0 ppm
0.072
0.21
1.25
5
Japanese quail 2−generation dosing study, P1BF1B
EGGLAY = Days to onset of egg laying
Treatment group
0 ppm
0.072
0.21
1.25
5
Japanese quail 2−generation dosing study, P1BF1B
WTGAINF = Female wt gain
Treatment group
0 ppm
0.072
0.21
1.25
5
Japanese quail 2−generation dosing study, P1BF1B
PTIBL = Tibial length females
Treatment group
0 ppm
0.072
0.21
1.25
5


Japanese quail 2−generation dosing study, P1BF1B
PrTrL = Tarsal length females
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1BF1B
PrTBw = Tibial weight females
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1BF1B
PrTED = Tibial diameter females
Treatment group
0 ppm
0.072
0.21
125
5
Japanese quail 2−generation dosing study, P1BF1B
MrTBL = Tibial length males
Treatment group
0 ppm
0.072
0.21
125
5


Japanese quail 2−generation dosing study, P1BF1B
MrTARL = Tarsal length males
0 ppm
0.072
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
MrTBW = Tibial weight males
0 ppm
0.072
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
MrTBD = Tibial diameter males
0 ppm
0.072
0.21
1.25
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
CLOACA = Area of cloaca at necropsy
0 ppm
0.072
0.21
1.25
5
Treatment group


Japanese quail 2−generation dosing study, P1BF1B
FOAM = Age at first foam (days)
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
PLUMM = Length of female−type plumage in males
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
PLUMF = Length of female−type plumage in females
0 ppm
0.073
0.21
125
5
Treatment group
Japanese quail 2−generation dosing study, P1BF1B
ADRBWF = Adrenal to body weight ratio in females
0 ppm
0.073
0.21
125
5
Treatment group


Japanese quail 2−generation dosing study, P1BF1B
ADRBy/M = Adrenal to body weight ratio in males
0.0004
0.0003
0.0002
0.0001
0
0 ppm
0.073
0.21
1.25
5
Treatment group


Japanese quail 2−generation dosing study, P1BF1B
SRyPC = Sex ratio of P2 chicks
2.5
2.0
1.5
1.0
0.5
0
0 ppm
0.073
0.21
1.25
5
Treatment group