

a) BPA Treatments in the Stop Dose Arm

**Table 1. Counts of Sperm Morphology  
 Abnormality for Bisphenol-A Stop Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )**

Dose	Type	Abnormal		Percent
		Count	N (Animals)	
0	Head	0	20	100.0
	Tail	0	17	85.0
		1	3	15.0
	Total	0	17	85.0
2.5	Head	0	20	100.0
	Tail	0	17	85.0
		1	3	15.0
	Total	0	17	85.0
25	Head	0	17	89.5
		1	2	10.5
	Tail	0	16	84.2
		1	2	10.5
250	Head	0	15	78.9
		1	2	10.5
	Tail	2	2	10.5
	Total	0	18	94.7
2500	Head	1	1	5.3
	Tail	0	17	89.5
		1	2	10.5
	Total	0	16	84.2
25000	Head	1	3	15.8
	Tail	0	18	90.0
		1	2	10.0
	Total	0	16	80.0
25000	Head	1	4	20.0
	Tail	0	14	70.0
		1	6	30.0
	Total	0	22	100.0
25000	Head	0	22	100.0
	Tail	0	22	100.0
	Total	0	22	100.0

**Table 2. Summary Statistics of Sperm Outcomes for Bisphenol-A Stop-Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )**

Outcome	0			2.5			25			250			2500			25000		
	N	Mean	SE	N	Mean	SE	N	Mean	SE	N	Mean	SE	N	Mean	SE	N	Mean	SE
Cauda Counts	20	1059.1	86.6	20	1185.5	83.3	19	1016.7	65.5	19	1111.3	66.1	20	1020.3	89.1	22	1015.6	81.1
Percent Motility	20	74.8	4.3	20	75.8	2.3	19	72.4	3.4	19	70.2	4.2	20	67.9	5.6	22	77.7	2.2
Testes Counts	20	76.5	9.4	20	77.7	4.8	19	72.2	5.3	19	72.5	6.3	20	73.6	9.0	22	75.8	4.7

RR-9: CLARITY-BPA Core Study  
 Data from 30-Appendix XXX Organ Weight Statistical Report

**Table 3. Poisson Regression of Sperm Morphology Abnormality Counts Per Animal for Bisphenol-A Stop Dose ( $\mu\text{g}/\text{kg}\cdot\text{BW}/\text{day}$ )**

Abnormality	0			2.5			25			250			2500			25000		
	Mean <sup>2</sup>	SE	Trend	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P
Total	0.15	0.09	0.970	0.15	0.09	1.000	0.32	0.13	0.748	0.16	0.09	1.000	0.30	0.12	0.795	0.00	0.00	1.000
Head	0.00	0.00	0.993	0.00	0.00	1.000	0.11	0.07	1.000	0.05	0.05	1.000	0.10	0.07	1.000	0.00	0.00	1.000
Tail	0.15	0.09	0.969	0.15	0.09	1.000	0.21	0.11	0.992	0.11	0.07	0.996	0.20	0.10	0.996	0.00	0.00	1.000

<sup>1</sup> All p-values for dose comparisons are relative to control and were adjusted using Dunnett's method.

<sup>2</sup> Mean counts and standard errors were estimated using Poisson analysis.

**Table 4. ANOVA Comparison of Least Squares Mean Sperm Outcomes for Bisphenol-A Stop Dose ( $\mu\text{g}/\text{kg}\cdot\text{BW}/\text{day}$ )<sup>1</sup>**

Outcome	0			2.5			25			250			2500			25000		
	Mean	SE	Trend	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P
Percent Sperm Motility	74.8	3.8	0.725	75.8	3.8	1.000	72.4	3.9	0.991	70.2	3.9	0.872	67.9	3.8	0.581	77.7	3.7	0.974
Cauda Sperm Counts	1059.1	79.7	0.348	1185.5	79.7	0.690	1016.7	81.8	0.996	1111.3	81.8	0.989	1020.3	79.7	0.997	1015.6	76.0	0.994
Testes Sperm Counts	76.5	6.8	0.786	77.7	6.8	1.000	72.2	7.0	0.990	72.5	7.0	0.993	73.6	6.8	0.998	75.8	6.5	1.000

<sup>1</sup> All p-values for dose comparisons are relative to the control group and were adjusted using Dunnett's method.

**b) BPA Treatments in the Continuous Dose Arm**

**Table 5. Counts of Sperm Morphology  
 Abnormality for Bisphenol-A Continuous Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )**

Dose	Type	Abnormal		Percent
		Count	N (Animals)	
0	Head	0	18	100.0
	Tail	0	15	83.3
		1	3	16.7
	Total	0	15	83.3
1		3	16.7	
2.5	Head	0	21	95.5
		1	1	4.5
	Tail	0	15	68.2
		1	6	27.3
		2	1	4.5
	Total	0	14	63.6
1		7	31.8	
2		1	4.5	
25	Head	0	17	94.4
		1	1	5.6
	Tail	0	15	83.3
		1	3	16.7
	Total	0	15	83.3
		1	2	11.1
		2	1	5.6
250	Head	0	22	91.7
		1	2	8.3
	Tail	0	22	91.7
		1	2	8.3
	Total	0	20	83.3
		1	4	16.7
2500	Head	0	16	88.9
		1	2	11.1
	Tail	0	16	88.9
		1	2	11.1
	Total	0	14	77.8
		1	4	22.2
25000	Head	0	21	100.0
	Tail	0	18	85.7
		1	3	14.3
	Total	0	18	85.7
		1	3	14.3

**Table 6. Summary Statistics of Sperm Outcomes for Bisphenol-A Continuous Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )**

Outcome	0			2.5			25			250			2500			25000		
	N	Mean	SE	N	Mean	SE	N	Mean	SE	N	Mean	SE	N	Mean	SE	N	Mean	SE
Cauda Counts	18	990.8	78.0	22	999.3	87.7	18	1075.5	68.5	24	997.7	68.7	18	1061.9	51.0	21	1027.2	80.7
Percent Motility	18	65.9	4.6	22	64.0	5.1	18	72.4	3.1	24	66.7	4.5	18	69.9	3.4	21	69.4	4.2
Testes Counts	18	83.4	9.5	22	76.8	7.7	18	88.5	6.1	24	81.5	6.8	18	85.1	7.1	21	76.6	6.0

RR-9: CLARITY-BPA Core Study  
 Data from 30-Appendix XXX Organ Weight Statistical Report

**Table 7. Poisson Regression of Sperm Morphology Abnormality Counts Per Animal for Bisphenol-A Continuous Dose ( $\mu\text{g}/\text{kg}\cdot\text{BW}/\text{day}$ )<sup>1</sup>**

Abnormality	0			2.5			25			250			2500			25000		
	Mean <sup>2</sup>	SE	Trend	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P
Total	0.17	0.10	0.524	0.41	0.14	0.491	0.22	0.11	0.993	0.17	0.08	1.000	0.22	0.11	0.993	0.14	0.08	1.000
Head	0.00	0.00	0.999	0.05	0.05	1.000	0.06	0.06	1.000	0.08	0.06	1.000	0.11	0.08	1.000	0.00	0.00	1.000
Tail	0.17	0.10	0.299	0.36	0.13	0.666	0.17	0.10	1.000	0.08	0.06	0.907	0.11	0.08	0.990	0.14	0.08	1.000

<sup>1</sup> All p-values for dose comparisons are relative to control and were adjusted using Dunnett's method.

<sup>2</sup> Mean counts and standard errors were estimated using Poisson analysis.

**Table 8. ANOVA Comparison of Least Squares Mean Sperm Outcomes for Bisphenol-A Continuous Dose ( $\mu\text{g}/\text{kg}\cdot\text{BW}/\text{day}$ )<sup>1</sup>**

Outcome	0			2.5			25			250			2500			25000		
	Mean	SE	Trend	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P	Mean	SE	P
Percent Sperm Motility	65.9	4.6	0.425	64.0	4.2	0.998	72.4	4.6	0.769	66.7	4.0	1.000	69.9	4.6	0.956	69.4	4.3	0.971
Cauda Sperm Counts	990.8	79.2	0.647	999.3	71.7	1.000	1075.5	79.2	0.904	997.7	68.6	1.000	1061.9	79.2	0.950	1027.2	73.3	0.997
Testes Sperm Counts	83.4	7.7	0.789	76.8	7.0	0.950	88.5	7.7	0.986	81.5	6.7	1.000	85.1	7.7	1.000	76.6	7.1	0.944

<sup>1</sup> All p-values for dose comparisons are relative to the control group and were adjusted using Dunnett's method.

c) *EE<sub>2</sub> Treatments in the Continuous Dose Arm*

**Table 9. Counts of Sperm Morphology  
 Abnormality for Ethinyl Estradiol Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )**

<i>Dose</i>	<i>Type</i>	<i>Abnormal Count</i>	<i>N (Animals)</i>	<i>Percent</i>
0	Head	0	18	100.0
	Tail	0	15	83.3
		1	3	16.7
	Total	0	15	83.3
		1	3	16.7
0.05	Head	0	17	77.3
		1	5	22.7
	Tail	0	17	77.3
		1	5	22.7
	Total	0	14	63.6
		1	6	27.3
		2	2	9.1
0.5	Head	0	22	95.7
		1	1	4.3
	Tail	0	21	91.3
		1	1	4.3
		2	1	4.3
	Total	0	20	87.0
		1	2	8.7
		2	1	4.3

**Table 10. Summary Statistics of Sperm Outcomes  
 for Ethinyl Estradiol Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )**

<i>Outcome</i>	<i>0</i>			<i>0.05</i>			<i>0.5</i>		
	<i>N</i>	<i>Mean</i>	<i>SE</i>	<i>N</i>	<i>Mean</i>	<i>SE</i>	<i>N</i>	<i>Mean</i>	<i>SE</i>
Cauda Counts	18	990.8	78.0	22	891.7	71.6	23	856.9	53.1
Percent Motility	18	65.9	4.6	22	67.2	4.8	23	70.8	2.7
Testes Counts	18	83.4	9.5	22	70.0	4.7	23	73.7	4.5

**Table 11. Poisson Regression of Sperm Morphology Abnormality Counts Per Animal for Ethinyl Estradiol Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )<sup>1</sup>**

Abnormality	0		0.05		P	0.5		P
	Mean <sup>2</sup>	SE	Mean	SE		Mean	SE	
Total	0.17	0.10	0.45	0.14	0.213	0.17	0.09	0.997
Head	0.00	0.00	0.23	0.10	0.972	0.04	0.04	0.976
Tail	0.17	0.10	0.23	0.10	0.873	0.13	0.08	0.934

<sup>1</sup> All p-values for dose comparisons are relative to control and were adjusted using Dunnett's method.

<sup>2</sup> Mean counts and standard errors were estimated using Poisson analysis.

**Table 12. ANOVA Comparison of Least Squares Mean Sperm Outcomes for Ethinyl Estradiol Dose ( $\mu\text{g}/\text{kg}_{\text{BW}}/\text{day}$ )<sup>1</sup>**

Outcome	0		0.05		P	0.5		P
	Mean	SE	Mean	SE		Mean	SE	
Percent Sperm Motility	65.9	4.4	67.2	4.0	0.968	70.8	3.9	0.617
Cauda Sperm Counts	990.8	72.3	891.7	65.4	0.487	856.9	64.0	0.282
Testes Sperm Counts	83.4	6.7	70.0	6.0	0.239	73.7	5.9	0.445

<sup>1</sup> All p-values for dose comparisons are relative to the control group and were adjusted using Dunnett's method.