

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P11: STATISTICAL ANALYSIS OF SURVIVAL DATA**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:17:36  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

**C Number:** MG96006  
**Lock Date:** 12/02/2008  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Both  
**PWG Approval Date** NONE

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Male RAT  
 FIRST TERMINAL SACRIFICE AT 756 DAYS  
 INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = F1 0PPB			UNCENSORED DEATHS 17			CENSORED DEATHS 0			TERMINAL 34				
TOTAL 51													
<b>UNCENSORED DEATH DAYS</b>													
383	413	443	478	526	556	592	619	631	647	688	702	704	730
741	744	755											
<b>CENSORED DEATH DAYS</b>													
none													
DOSE = F1 2PPB			UNCENSORED DEATHS 19			CENSORED DEATHS 0			TERMINAL 31				
TOTAL 50													
<b>UNCENSORED DEATH DAYS</b>													
146	198	386	492	554	596	597	598	600	617	638	639	650	688
696	704	716	737	743									
<b>CENSORED DEATH DAYS</b>													
none													
DOSE = F1/2PPB TO CTL			UNCENSORED DEATHS 19			CENSORED DEATHS 0			TERMINAL 31				
TOTAL 50													
<b>UNCENSORED DEATH DAYS</b>													
485	510	534	549	569	603	610	619	623	642	646	656	681	695
719	725	736	737	747									
<b>CENSORED DEATH DAYS</b>													
none													
DOSE = F1 10PPB			UNCENSORED DEATHS 20			CENSORED DEATHS 0			TERMINAL 30				
TOTAL 50													
<b>UNCENSORED DEATH DAYS</b>													
467	494	552	562	596	602	602	615	624	632	633	667	669	688
696	709	737	737	744	744								
<b>CENSORED DEATH DAYS</b>													
none													

(A) FIRST TERMINAL SACRIFICE

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(C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

(D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

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Male RAT  
 FIRST TERMINAL SACRIFICE AT 756 DAYS  
 INDIVIDUAL SURVIVAL TIMES (DAYS)

<b>DOSE = F1/10PPB TO CTL</b>													
TOTAL 50			UNCENSORED DEATHS 17				CENSORED DEATHS 0				TERMINAL 33		
<b>UNCENSORED DEATH DAYS</b>													
219	241	386	454	511	512	576	659	669	677	725	729	730	736
743	746	746											
<b>CENSORED DEATH DAYS</b>													
none													
<b>DOSE = F1 50PPB</b>													
TOTAL 50			UNCENSORED DEATHS 16				CENSORED DEATHS 0				TERMINAL 34		
<b>UNCENSORED DEATH DAYS</b>													
233	258	417	500	585	636	647	653	661	682	685	689	702	703
737	750												
<b>CENSORED DEATH DAYS</b>													
none													
<b>DOSE = F1/50PPB TO CTL</b>													
TOTAL 50			UNCENSORED DEATHS 17				CENSORED DEATHS 0				TERMINAL 33		
<b>UNCENSORED DEATH DAYS</b>													
469	556	573	594	601	601	619	646	646	654	675	715	738	738
746	750	752											
<b>CENSORED DEATH DAYS</b>													
none													

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**Lab:** NCTR

Male RAT  
 FIRST TERMINAL SACRIFICE AT 756 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)

DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	756(A)
F1 0PPB	100.0	100.0	100.0	100.0	96.1	92.2	90.2	86.3	80.4	66.7
F1 2PPB	100.0	98.0	96.0	96.0	94.0	94.0	92.0	82.0	74.0	62.0
F1/2PPB TO CTL	100.0	100.0	100.0	100.0	100.0	98.0	94.0	88.0	76.0	62.0
F1 10PPB	100.0	100.0	100.0	100.0	100.0	98.0	96.0	86.0	78.0	60.0
F1/10PPB TO CTL	100.0	100.0	96.0	96.0	94.0	92.0	88.0	86.0	84.0	66.0
F1 50PPB	100.0	100.0	96.0	96.0	94.0	94.0	92.0	90.0	82.0	68.0
F1/50PPB TO CTL	100.0	100.0	100.0	100.0	100.0	98.0	98.0	88.0	80.0	66.0

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Male RAT  
FIRST TERMINAL SACRIFICE AT 756 DAYS

SURVIVAL SUMMARY STATISTICS

DOSE	F1 0PPB	F1 2PPB	F1/2PPB TO CTL	F1 10PPB
<b>SURVIVAL AT END OF STUDY</b> (KAPLAN-MEIER)	66.7%	62.0%	62.0%	60.0%
<b>SIGNIFICANCE (B)</b> (LIFE TABLE)	P=0.543N	P=0.709	P=0.777	P=0.642
<b>MEAN DAY OF NATURAL DEATHS (C)</b> (STANDARD ERROR)	608.9 (29.8)	578.7 (38.4)	636.1 (18.5)	638.5 (18.0)
<b>MEAN LIFE SPAN (D)</b> (STANDARD ERROR)	707.0 (13.8)	688.6 (18.9)	710.4 (10.8)	709.0 (10.9)

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**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P11: STATISTICAL ANALYSIS OF SURVIVAL DATA**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
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**First Dose M/F:** NA / NA  
**Lab:** NCTR

**Male RAT**  
**FIRST TERMINAL SACRIFICE AT 756 DAYS**

**SURVIVAL SUMMARY STATISTICS**

<b>DOSE</b>	<b>F1/10PPB TO CTL</b>	<b>F1 50PPB</b>	<b>F1/50PPB TO CTL</b>
<b>SURVIVAL AT END OF STUDY</b> (KAPLAN-MEIER)	66.0%	68.0%	66.0%
<b>SIGNIFICANCE (B)</b> (LIFE TABLE)	P=1.000	P=1.000N	P=1.000N
<b>MEAN DAY OF NATURAL DEATHS (C)</b> (STANDARD ERROR)	591.7 (42.9)	596.1 (40.3)	651.4 (19.8)
<b>MEAN LIFE SPAN (D)</b> (STANDARD ERROR)	700.1 (18.1)	704.8 (16.5)	720.4 (9.7)

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**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

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**Lab:** NCTR

**Female RAT**  
**FIRST TERMINAL SACRIFICE AT 756 DAYS**  
**INDIVIDUAL SURVIVAL TIMES (DAYS)**

DOSE = F1 0PPB			UNCENSORED DEATHS 24			CENSORED DEATHS 0			TERMINAL 27				
TOTAL 51													
<b>UNCENSORED DEATH DAYS</b>													
529	539	568	595	598	614	631	645	649	653	668	669	672	675
679	679	686	690	700	702	713	717	720	720				
<b>CENSORED DEATH DAYS</b>													
none													
DOSE = F1 2PPB			UNCENSORED DEATHS 27			CENSORED DEATHS 0			TERMINAL 23				
TOTAL 50													
<b>UNCENSORED DEATH DAYS</b>													
87	349	468	499	504	563	594	595	602	624	643	644	652	667
667	678	684	686	691	702	705	712	728	729	730	739	747	
<b>CENSORED DEATH DAYS</b>													
none													
DOSE = F1/2PPB TO CTL			UNCENSORED DEATHS 33			CENSORED DEATHS 0			TERMINAL 17				
TOTAL 50													
<b>UNCENSORED DEATH DAYS</b>													
87	406	452	503	509	514	515	530	538	542	569	592	597	618
618	620	632	634	661	666	670	673	675	683	685	689	725	729
730	736	737	748	752									
<b>CENSORED DEATH DAYS</b>													
none													

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**Female RAT**  
**FIRST TERMINAL SACRIFICE AT 756 DAYS**  
**INDIVIDUAL SURVIVAL TIMES (DAYS)**

<b>DOSE = F1 10 PPB</b>													
TOTAL 50			UNCENSORED DEATHS 31				CENSORED DEATHS 0			TERMINAL 19			
<b>UNCENSORED DEATH DAYS</b>													
275	391	538	555	555	575	579	582	583	604	632	634	645	657
666	673	675	676	687	688	695	701	703	709	715	725	727	730
734	737	754											
<b>CENSORED DEATH DAYS</b>													
none													
<b>DOSE = F1/10PPB TO CTL</b>													
TOTAL 50			UNCENSORED DEATHS 28				CENSORED DEATHS 0			TERMINAL 22			
<b>UNCENSORED DEATH DAYS</b>													
254	477	491	510	519	537	546	561	566	612	632	639	641	646
668	674	687	701	702	714	715	717	724	730	737	738	748	748
<b>CENSORED DEATH DAYS</b>													
none													
<b>DOSE = F1 50 PPB</b>													
TOTAL 50			UNCENSORED DEATHS 25				CENSORED DEATHS 0			TERMINAL 25			
<b>UNCENSORED DEATH DAYS</b>													
289	516	584	592	597	614	626	646	650	653	654	658	666	666
670	680	687	689	701	706	711	722	726	727	730			
<b>CENSORED DEATH DAYS</b>													
none													
<b>DOSE = F1/50PPB TO CTL</b>													
TOTAL 50			UNCENSORED DEATHS 28				CENSORED DEATHS 0			TERMINAL 22			
<b>UNCENSORED DEATH DAYS</b>													
404	495	511	561	574	593	598	617	620	632	645	652	653	665
667	689	695	696	698	701	702	715	724	728	736	738	742	746
<b>CENSORED DEATH DAYS</b>													
none													

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**Lab:** NCTR

Female RAT  
 FIRST TERMINAL SACRIFICE AT 756 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)

DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	756(A)
F1 0PPB	100.0	100.0	100.0	100.0	100.0	100.0	96.1	90.2	80.4	52.9
F1 2PPB	98.0	98.0	98.0	96.0	96.0	94.0	90.0	82.0	74.0	46.0
F1/2PPB TO CTL	98.0	98.0	98.0	98.0	96.0	94.0	80.0	74.0	62.0	34.0
F1 10 PPB	100.0	100.0	100.0	98.0	96.0	96.0	94.0	80.0	72.0	38.0
F1/10PPB TO CTL	100.0	100.0	98.0	98.0	98.0	96.0	88.0	82.0	72.0	44.0
F1 50 PPB	100.0	100.0	100.0	98.0	98.0	98.0	96.0	90.0	76.0	50.0
F1/50PPB TO CTL	100.0	100.0	100.0	100.0	98.0	98.0	94.0	86.0	72.0	44.0

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Female RAT  
 FIRST TERMINAL SACRIFICE AT 756 DAYS

SURVIVAL SUMMARY STATISTICS

DOSE	F1 0PPB	F1 2PPB	F1/2PPB TO CTL	F1 10 PPB
<b>SURVIVAL AT END OF STUDY</b> (KAPLAN-MEIER)	52.9%	46.0%	34.0%	38.0%
<b>SIGNIFICANCE (B)</b> (LIFE TABLE)	P=0.540N	P=0.570	P=0.051	P=0.210
<b>MEAN DAY OF NATURAL DEATHS (C)</b> (STANDARD ERROR)	654.6 (11.3)	618.1 (27.4)	607.1 (22.8)	638.7 (18.6)
<b>MEAN LIFE SPAN (D)</b> (STANDARD ERROR)	708.3 (8.9)	681.5 (17.6)	657.7 (18.0)	683.3 (14.0)

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Female RAT  
FIRST TERMINAL SACRIFICE AT 756 DAYS

SURVIVAL SUMMARY STATISTICS

DOSE	F1/10PPB TO CTL	F1 50 PPB	F1/50PPB TO CTL
<b>SURVIVAL AT END OF STUDY</b> (KAPLAN-MEIER)	44.0%	50.0%	44.0%
<b>SIGNIFICANCE (B)</b> (LIFE TABLE)	P=0.477	P=0.909	P=0.522
<b>MEAN DAY OF NATURAL DEATHS (C)</b> (STANDARD ERROR)	629.8 (21.4)	646.4 (18.2)	649.9 (15.8)
<b>MEAN LIFE SPAN (D)</b> (STANDARD ERROR)	685.3 (14.9)	701.2 (11.9)	696.6 (11.6)

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**\*\* END OF REPORT \*\***

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