

**Experiment Number:** 00058 - 03  
**Test Type:** CHRONIC  
**Route:** GAVAGE  
**Species/Strain:** RATS/HSD

**P11: STATISTICAL ANALYSIS OF SURVIVAL DATA**  
Black Cohosh  
**CAS Number:** 84776-26-1

**Date Report Requested:** 10/07/2020  
**Time Report Requested:** 11:17:00  
**First Dose M/F:** 07/03/12 / 07/02/12  
**Lab:** BAT

Rats Final 1

**NTP Study Number:** C00058B  
**Lock Date:** 10/02/2018  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 3.0.2.3\_002  
**PWG Approval Date:** NONE

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MALE RATS

FIRST TERMINAL SACRIFICE AT 730 DAYS

INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 0 mg/kg male

TOTAL 50			UNCENSORED DEATHS 35					CENSORED DEATHS 0					TERMINAL 15	
UNCENSORED DEATH DAYS														
155	354	481	538	562	573	577	598	599	616	618	621	623	624	
631	643	643	646	646	654	666	672	674	676	678	680	692	693	
704	711	711	718	718	720	726								
CENSORED DEATH DAYS														
None														

DOSE = 75 mg/kg male

TOTAL 50			UNCENSORED DEATHS 35					CENSORED DEATHS 0					TERMINAL 15	
UNCENSORED DEATH DAYS														
274	433	447	475	488	553	557	559	560	575	575	596	611	617	
618	618	630	637	637	644	653	654	654	666	669	676	680	680	
687	706	708	711	713	724	729								
CENSORED DEATH DAYS														
None														

DOSE = 250 mg/kg male

TOTAL 50			UNCENSORED DEATHS 29					CENSORED DEATHS 0					TERMINAL 21	
UNCENSORED DEATH DAYS														
402	413	435	445	498	521	547	558	589	592	595	604	606	609	
616	618	621	664	677	679	682	688	693	694	694	695	711	725	
725														
CENSORED DEATH DAYS														
None														

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**MALE RATS**

FIRST TERMINAL SACRIFICE AT 730 DAYS

INDIVIDUAL SURVIVAL TIMES (DAYS)

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**DOSE = 750 mg/kg male**

TOTAL 50

UNCENSORED DEATHS 34

CENSORED DEATHS 0

TERMINAL 16

UNCENSORED DEATH DAYS

434	441	442	449	502	520	554	564	569	586	598	607	611	613
614	620	632	633	643	643	650	650	653	663	669	672	674	682
693	705	711	713	718	725								

CENSORED DEATH DAYS

None

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MALE RATS

FIRST TERMINAL SACRIFICE AT 730 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)										
DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	730(A)
0 mg/kg male	100.0	98.0	98.0	96.0	96.0	94.0	92.0	82.0	60.0	30.0
75 mg/kg male	100.0	100.0	100.0	98.0	98.0	92.0	90.0	76.0	54.0	30.0
250 mg/kg male	100.0	100.0	100.0	100.0	96.0	92.0	88.0	76.0	64.0	42.0
750 mg/kg male	100.0	100.0	100.0	100.0	100.0	92.0	88.0	78.0	52.0	32.0

(A) FIRST TERMINAL SACRIFICE

(B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

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

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

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**MALE RATS**

FIRST TERMINAL SACRIFICE AT 730 DAYS

**SURVIVAL SUMMARY STATISTICS**

DOSE	0 mg/kg male	75 mg/kg male	250 mg/kg male	750 mg/kg male
<b>SURVIVAL AT END OF STUDY</b> (KAPLAN-MEIER)	30.0%	30.0%	42.0%	32.0%
<b>SIGNIFICANCE (B)</b> (LIFE TABLE)	P=1.000	P=0.867	P=0.420N	P=0.966
<b>MEAN DAY OF NATURAL DEATHS (C)</b> (STANDARD ERROR)	624.0 (18.7)	611.8 (16.4)	606.8 (17.8)	613.3 (14.3)
<b>MEAN LIFE SPAN (D)</b> (STANDARD ERROR)	655.8 (14.8)	647.3 (13.8)	658.5 (13.4)	650.7 (12.4)

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FEMALE RATS

FIRST TERMINAL SACRIFICE AT 729 DAYS

INDIVIDUAL SURVIVAL TIMES (DAYS)

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**DOSE = 0 mg/kg female**

TOTAL 50	UNCENSORED DEATHS 22				CENSORED DEATHS 0				TERMINAL 28				
UNCENSORED DEATH DAYS													
499	504	521	524	530	536	556	578	597	600	606	618	655	655
670	677	681	693	706	708	715	719						
CENSORED DEATH DAYS													
None													

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**DOSE = 75 mg/kg female**

TOTAL 50	UNCENSORED DEATHS 26				CENSORED DEATHS 0				TERMINAL 24				
UNCENSORED DEATH DAYS													
302	332	386	397	482	499	512	570	588	600	605	614	615	629
633	634	648	663	672	675	675	691	712	712	712	726		
CENSORED DEATH DAYS													
None													

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**DOSE = 250 mg/kg female**

TOTAL 50	UNCENSORED DEATHS 21				CENSORED DEATHS 0				TERMINAL 29				
UNCENSORED DEATH DAYS													
360	488	538	538	578	597	605	608	638	643	644	648	658	668
676	677	690	697	704	715	726							
CENSORED DEATH DAYS													
None													

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**FEMALE RATS**

FIRST TERMINAL SACRIFICE AT 729 DAYS

INDIVIDUAL SURVIVAL TIMES (DAYS)

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**DOSE = 750 mg/kg female**

TOTAL 50

UNCENSORED DEATHS 30

CENSORED DEATHS 0

TERMINAL 20

UNCENSORED DEATH DAYS

4	430	475	478	498	501	509	532	540	548	551	570	570	571
578	586	600	600	617	625	629	635	637	641	650	661	675	702
702	719												

CENSORED DEATH DAYS

None

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KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)										
DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	729(A)
0 mg/kg female	100.0	100.0	100.0	100.0	100.0	100.0	88.0	80.0	72.0	56.0
75 mg/kg female	100.0	100.0	100.0	96.0	92.0	90.0	86.0	78.0	64.0	48.0
250 mg/kg female	100.0	100.0	100.0	98.0	98.0	98.0	92.0	86.0	74.0	58.0
750 mg/kg female	98.0	98.0	98.0	98.0	98.0	92.0	82.0	64.0	48.0	40.0

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**SURVIVAL SUMMARY STATISTICS**

DOSE	0 mg/kg female	75 mg/kg female	250 mg/kg female	750 mg/kg female
<b>SURVIVAL AT END OF STUDY</b> (KAPLAN-MEIER)	56.0%	48.0%	58.0%	40.0%
<b>SIGNIFICANCE (B)</b> (LIFE TABLE)	P=0.067	P=0.482	P=0.908N	P=0.081
<b>MEAN DAY OF NATURAL DEATHS (C)</b> (STANDARD ERROR)	615.8 (16.1)	587.8 (23.7)	623.6 (19.0)	567.8 (23.5)
<b>MEAN LIFE SPAN (D)</b> (STANDARD ERROR)	679.2 (10.7)	655.6 (15.8)	684.7 (10.8)	632.3 (18.0)

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

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