

Experiment Number: 20403 - 01
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA
Zinc Carbonate, Basic
CAS Number: 5263-02-5

Date Report Requested: 11/22/2015
Time Report Requested: 17:53:40
First Dose M/F: 09/03/09 / 09/04/09
Lab: BAT

Custom Report - Zinc Excess

NTP Study Number: C20403
Lock Date: 04/05/2013
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include 001 Control (38ppm) Include 002 Control (38ppm) Include 007 250ppmModZnExc
Include 008 250ppmModZnExc Include 009 500ppm ZnExc Include 010 500ppm ZnExc
Study Gender: Both
TDMSE Version: 2.5.0.0_sfh
PWG Approval Date: 09/08/2015

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MALE RATS

FIRST TERMINAL SACRIFICE AT 734 DAYS

INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = Control (38ppm)

TOTAL 60				UNCENSORED DEATHS 32				CENSORED DEATHS 10				TERMINAL 18			
UNCENSORED DEATH DAYS															
186	488	496	514	537	538	546	552	553	586	609	611	615	636		
638	642	652	656	664	664	673	678	683	684	691	691	693	701		
701	701	729	733												
CENSORED DEATH DAYS															
370	370	370	370	370	370	370	370	370	370						

DOSE = 250ppmModZnExc

TOTAL 60				UNCENSORED DEATHS 29				CENSORED DEATHS 10				TERMINAL 21			
UNCENSORED DEATH DAYS															
330	363	420	436	461	474	551	562	565	593	615	622	635	636		
644	645	648	670	670	671	677	680	680	680	683	700	713	723		
725															
CENSORED DEATH DAYS															
370	370	370	370	370	370	370	370	370	370						

DOSE = 500ppm ZnExc

TOTAL 60				UNCENSORED DEATHS 30				CENSORED DEATHS 10				TERMINAL 20			
UNCENSORED DEATH DAYS															
355	362	405	412	418	526	541	593	597	599	628	637	642	645		
649	649	660	665	669	681	691	704	704	707	707	715	715	717		
718	729														
CENSORED DEATH DAYS															
370	370	370	370	370	370	370	370	370	370						

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FIRST TERMINAL SACRIFICE AT 734 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)										
DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	734(A)
Control (38ppm)	100.0	100.0	98.3	98.3	98.3	98.3	88.3	80.3	60.2	36.1
250ppmModZnExc	100.0	100.0	100.0	96.7	94.7	88.6	88.6	80.6	66.5	42.3
500ppm ZnExc	100.0	100.0	100.0	96.7	90.6	90.6	86.6	80.6	64.4	40.3

(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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FIRST TERMINAL SACRIFICE AT 734 DAYS

SURVIVAL SUMMARY STATISTICS			
DOSE	Control (38ppm)	250ppmModZnExc	500ppm ZnExc
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	36.1%	42.3%	40.3%
SIGNIFICANCE (B) (LIFE TABLE)	P=0.650N	P=0.755N	P=0.670N
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	616.9 (18.6)	602.5 (20.4)	614.7 (20.9)
MEAN LIFE SPAN (D) (STANDARD ERROR)	610.9 (18.4)	609.8 (18.7)	613.7 (18.9)

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FEMALE RATS

FIRST TERMINAL SACRIFICE AT 725 DAYS

INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = Control (38ppm)

TOTAL 60		UNCENSORED DEATHS 26					CENSORED DEATHS 9					TERMINAL 25	
UNCENSORED DEATH DAYS													
253	291	362	435	469	523	540	549	568	575	582	584	593	601
609	621	635	656	676	676	677	681	690	692	700	704		
CENSORED DEATH DAYS													
370	370	370	370	370	370	370	370	370					

DOSE = 250ppmModZnExc

TOTAL 60		UNCENSORED DEATHS 24					CENSORED DEATHS 9					TERMINAL 27	
UNCENSORED DEATH DAYS													
71	179	278	449	481	488	488	503	537	552	552	565	568	575
601	635	654	656	659	659	687	692	701	717				
CENSORED DEATH DAYS													
370	370	370	370	370	370	370	370	370					

DOSE = 500ppm ZnExc

TOTAL 60		UNCENSORED DEATHS 20					CENSORED DEATHS 9					TERMINAL 31	
UNCENSORED DEATH DAYS													
243	264	330	357	362	396	473	488	562	568	587	610	621	635
645	645	651	701	701	714								
CENSORED DEATH DAYS													
370	370	370	370	370	370	370	370	370					

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KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)										
DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	725(A)
Control (38ppm)	100.0	100.0	98.3	95.0	95.0	91.0	87.1	73.2	65.3	49.5
250ppmModZnExc	98.3	96.7	96.7	95.0	95.0	91.0	83.1	71.3	61.4	53.4
500ppm ZnExc	100.0	100.0	96.7	91.7	89.7	87.7	85.7	79.7	67.8	61.8

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SURVIVAL SUMMARY STATISTICS

DOSE	Control (38ppm)	250ppmModZnExc	500ppm ZnExc
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	49.5%	53.4%	61.8%
SIGNIFICANCE (B) (LIFE TABLE)	P=0.346N	P=0.920N	P=0.369N
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	574.7 (24.2)	539.5 (33.2)	527.7 (34.0)
MEAN LIFE SPAN (D) (STANDARD ERROR)	606.6 (18.9)	597.5 (21.2)	606.0 (20.6)

*** END OF REPORT ***

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