

Experiment Number: 20515 - 03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/Wistar Han

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA
Metal working fluids (CIMSTAR 3800)
CAS Number: CIMSTAR3800

Date Report Requested: 02/19/2013
Time Report Requested: 13:45:43
First Dose M/F: 04/14/08 / 04/14/08
Lab: BNW

F1_RE

NTP Study Number: C20515
Lock Date: 01/12/2011
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 3.0.1.1_001
PWG Approval Date: NONE

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MALE RATS

FIRST TERMINAL SACRIFICE AT 729 DAYS
 INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = Control

TOTAL 50	UNCENSORED DEATHS 17						CENSORED DEATHS 0					TERMINAL 33		
UNCENSORED DEATH DAYS														
345	494	520	535	597	597	599	607	612	619	627	653	704	704	
710	715	718												
CENSORED DEATH DAYS														
None														

DOSE = 10 mg/m3

TOTAL 50	UNCENSORED DEATHS 16						CENSORED DEATHS 0					TERMINAL 34		
UNCENSORED DEATH DAYS														
286	429	439	505	547	562	564	603	620	633	637	653	677	704	
704	717													
CENSORED DEATH DAYS														
None														

DOSE = 30 mg/m3

TOTAL 50	UNCENSORED DEATHS 16						CENSORED DEATHS 0					TERMINAL 34		
UNCENSORED DEATH DAYS														
309	564	564	620	639	646	653	684	700	704	704	704	711	722	
722	726													
CENSORED DEATH DAYS														
None														

DOSE = 100 mg/m3

TOTAL 50	UNCENSORED DEATHS 17						CENSORED DEATHS 0					TERMINAL 33		
UNCENSORED DEATH DAYS														
202	395	457	478	504	595	611	627	635	646	675	695	704	704	
704	722	725												
CENSORED DEATH DAYS														
None														

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FIRST TERMINAL SACRIFICE AT 729 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)										
DOSE	TIME (DAYS)									
	90	180	270	365	425	485	545	605	665	729(A)
Control	100.0	100.0	100.0	98.0	98.0	98.0	92.0	86.0	76.0	66.0
10 mg/m3	100.0	100.0	100.0	98.0	98.0	94.0	92.0	84.0	76.0	68.0
30 mg/m3	100.0	100.0	100.0	98.0	98.0	98.0	98.0	94.0	86.0	68.0
100 mg/m3	100.0	100.0	98.0	98.0	96.0	92.0	90.0	88.0	80.0	66.0

(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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FIRST TERMINAL SACRIFICE AT 729 DAYS

SURVIVAL SUMMARY STATISTICS				
DOSE	Control	10 mg/m3	30 mg/m3	100 mg/m3
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	66.0%	68.0%	68.0%	66.0%
SIGNIFICANCE (B) (LIFE TABLE)	P=1.000	P=1.000N	P=0.818N	P=1.000N
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	609.2 (23.5)	580.0 (29.5)	648.3 (26.2)	592.9 (34.6)
MEAN LIFE SPAN (D) (STANDARD ERROR)	688.3 (11.3)	681.3 (13.6)	703.2 (9.8)	682.7 (14.8)

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FEMALE RATS

FIRST TERMINAL SACRIFICE AT 731 DAYS
INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = Control

TOTAL 50 UNCENSORED DEATHS 15 CENSORED DEATHS 0 TERMINAL 35
UNCENSORED DEATH DAYS
402 499 586 599 610 610 619 619 645 690 698 703 703 709
712
CENSORED DEATH DAYS
None

DOSE = 10 mg/m3

TOTAL 50 UNCENSORED DEATHS 17 CENSORED DEATHS 1 TERMINAL 32
UNCENSORED DEATH DAYS
481 530 530 568 603 619 627 633 633 653 681 683 683 684
687 703 729
CENSORED DEATH DAYS
544

DOSE = 30 mg/m3

TOTAL 50 UNCENSORED DEATHS 14 CENSORED DEATHS 0 TERMINAL 36
UNCENSORED DEATH DAYS
563 598 603 642 646 660 673 681 683 684 690 705 708 719
CENSORED DEATH DAYS
None

DOSE = 100 mg/m3

TOTAL 50 UNCENSORED DEATHS 21 CENSORED DEATHS 0 TERMINAL 29
UNCENSORED DEATH DAYS
523 586 630 633 635 639 645 663 670 673 681 691 703 703
715 717 719 722 725 725 730
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	731(A)
Control	100.0	100.0	100.0	100.0	98.0	98.0	96.0	92.0	82.0	70.0
10 mg/m3	100.0	100.0	100.0	100.0	100.0	98.0	94.0	89.9	79.7	65.4
30 mg/m3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	94.0	88.0	72.0
100 mg/m3	100.0	100.0	100.0	100.0	100.0	100.0	98.0	96.0	84.0	58.0

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SURVIVAL SUMMARY STATISTICS				
DOSE	Control	10 mg/m3	30 mg/m3	100 mg/m3
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	70.0%	65.4%	72.0%	58.0%
SIGNIFICANCE (B) (LIFE TABLE)	P=0.380	P=0.738	P=0.926N	P=0.416
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	626.9 (22.4)	631.0 (16.8)	661.1 (12.3)	672.8 (11.6)
MEAN LIFE SPAN (D) (STANDARD ERROR)	699.8 (9.4)	693.3 (9.3)	711.4 (5.6)	706.5 (6.3)

*** END OF REPORT ***

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