

Study Number: R92025B
Test Type: RACB
Route: Dosing in Feed
Species/Strain: Rat/Sprague-Dawley

PA08R: Statistical Analysis of Neoplastic Lesions with Litter Incidence
Test Compound: 4-Methylimidazole
CAS Number: 822-36-6

Date Report Requested: 09/26/2018
Time Report Requested: 13:39:48
Lab: RTI

C Number: R92025B
Study Gender: Both
PWG Approval Date See web page for date of PWG Approval

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	F0 Male			
	Treatment Groups (ppm)			
	0	750	2500	5000
Disposition Summary				
Animals Initially In Study	23	23	23	23
Early Deaths				
Unscheduled Sacrifice			3	2
Scheduled Deaths				
Scheduled sacrifice, terminal (SD 15 - 178)	23	23	20	21
Number of Animals Examined	23	23	23	23

ALIMENTARY SYSTEM

None

CARDIOVASCULAR SYSTEM

None

ENDOCRINE SYSTEM

None

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

None

HEMATOPOIETIC SYSTEM

None

INTEGUMENTARY SYSTEM

None

LYMPHOID SYSTEM

None

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F0 Male

Treatment Groups (ppm)

0

750

2500

5000

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

None

SPECIAL SENSES SYSTEM

None

URINARY SYSTEM

None

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	F0 Female			
	Treatment Groups (ppm)			
	0	750	2500	5000
Disposition Summary				
Animals Initially In Study	23	23	23	23
Early Deaths				
Euthanized, moribund	1	1	3	8
Found Dead			1	1
Unscheduled Sacrifice				2
Scheduled Deaths				
Scheduled sacrifice, terminal (LD 4, SD 28 - 220)	22	22	19	12
Number of Animals Examined	23	10	23	23
ALIMENTARY SYSTEM				
None				
CARDIOVASCULAR SYSTEM				
None				
ENDOCRINE SYSTEM				
THYROID GLANDS	(23)	(1)	(23)	(23)
C-CELL ADENOMA			1 (4.3%)	
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
UTERUS	(23)	(3)	(23)	(23)
HORN; ENDOMETRIUM; POLYP; STROMAL		1 (33.3%)		
HEMATOPOIETIC SYSTEM				
None				

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F1 Male : F1 NonParental Male

Treatment Groups (ppm)

0

750

2500

LYMPHOID SYSTEM

None

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

None

SPECIAL SENSES SYSTEM

None

URINARY SYSTEM

None

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F1 Female : F1 NonParent Female

	Treatment Groups (ppm)		
	0	750	2500
Disposition Summary			
Animals Initially In Study	47	58	27
Early Deaths			
Scheduled Deaths			
Scheduled sacrifice, terminal (PND 91 - 93)	47	58	27
Number of Animals Examined	47	58	27
Total number litters	17	22	12
ALIMENTARY SYSTEM			
LIVER	(47)	(2)	(27)
NOT OTHERWISE SPECIFIED; SARCOMA		1 (50%) [1]	
CARDIOVASCULAR SYSTEM			
None			
ENDOCRINE SYSTEM			
None			
GENERAL BODY SYSTEM			
None			
GENITAL SYSTEM			
None			
HEMATOPOIETIC SYSTEM			
SPLEEN	(2)	(1)	(0)
NOT OTHERWISE SPECIFIED; SARCOMA		1 (100%) [1]	
INTEGUMENTARY SYSTEM			
None			

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F1 Female : F1 NonParent Female

Treatment Groups (ppm)

0

750

2500

LYMPHOID SYSTEM

None

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

None

SPECIAL SENSES SYSTEM

None

URINARY SYSTEM

None

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F1 Male : F1 Parental Males

	Treatment Groups (ppm)		
	0	750	2500
Disposition Summary			
Animals Initially In Study	40	44	40
Early Deaths			
Euthanized, moribund			1
Scheduled Deaths			
Scheduled sacrifice, terminal (PND 218 - 224)	40	44	39
Number of Animals Examined	40	44	40
Total number litters	18	22	15
ALIMENTARY SYSTEM			
None			
CARDIOVASCULAR SYSTEM			
None			
ENDOCRINE SYSTEM			
ADRENAL GLANDS	(40)	(0)	(40)
NEPHROBLASTOMA; MALIGNANT WITH METASTASIS			1 (2.5%) [1]
GENERAL BODY SYSTEM			
None			
GENITAL SYSTEM			
LEVATOR ANI PLUS BULBOCAVERNOSUS MUSCLE	(40)	(0)	(40)
LYMPHOMA; MALIGNANT	1 (2.5%) [1]		

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F1 Male : F1 Parental Males

	Treatment Groups (ppm)		
	0	750	2500
HEMATOPOIETIC SYSTEM			
LYMPH NODE, MEDIASTINAL	(1)	(0)	(0)
LYMPHOMA; MALIGNANT	1 (100%) [1]		
LYMPH NODE, RENAL	(1)	(0)	(0)
LYMPHOMA; MALIGNANT	1 (100%) [1]		
SPLEEN	(3)	(0)	(1)
LYMPHOMA; MALIGNANT	1 (33.3%) [1]		
INTEGUMENTARY SYSTEM			
SKIN	(0)	(2)	(0)
SEBACEOUS GLAND; EPITHELIUM; ADENOMA		1 (50%) [1]	
SUBCUTANEOUS; LIPOMA		1 (50%) [1]	
LYMPHOID SYSTEM			
None			
MUSCULOSKELETAL SYSTEM			
None			
NERVOUS SYSTEM			
None			
RESPIRATORY SYSTEM			
None			
SPECIAL SENSES SYSTEM			
None			

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F1 Male : F1 Parental Males

Treatment Groups (ppm)

0

750

2500

URINARY SYSTEM

KIDNEYS

(40)

(6)

(40)

LYMPHOMA; MALIGNANT

1 (2.5%) [1]

NEPHROBLASTOMA

1 (2.5%) [1]

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F1 Female : F1 Parental Females

	Treatment Groups (ppm)		
	0	750	2500
Disposition Summary			
Animals Initially In Study	40	44	40
Early Deaths			
Euthanized, moribund	2	3	6
Found Dead		1	1
Unscheduled Sacrifice	1	1	1
Scheduled Deaths			
Scheduled sacrifice, terminal (LD 26 - 28, PND 246 - 251)	37	39	32
Number of Animals Examined	40	43	40
Total number litters	19	22	15
ALIMENTARY SYSTEM			
LIVER	(40)	(43)	(40)
LYMPHOMA; MALIGNANT		1 (2.3%) [1]	
CARDIOVASCULAR SYSTEM			
None			
ENDOCRINE SYSTEM			
ADRENAL GLANDS	(40)	(43)	(40)
LYMPHOMA; MALIGNANT		1 (2.3%) [1]	
THYROID GLANDS	(40)	(43)	(40)
C-CELL; ADENOMA			1 (2.5%) [1]
GENERAL BODY SYSTEM			
None			

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F1 Female : F1 Parental Females

	Treatment Groups (ppm)		
	0	750	2500
GENITAL SYSTEM			
UTERUS	(40)	(43)	(40)
ENDOMETRIUM; POLYP; STROMAL	1 (2.5%) [1]		
HEMATOPOIETIC SYSTEM			
LYMPH NODE, MESENTERIC	(0)	(1)	(0)
LYMPHOMA; MALIGNANT		1 (100%) [1]	
SPLEEN	(0)	(1)	(0)
LYMPHOMA; MALIGNANT		1 (100%) [1]	
INTEGUMENTARY SYSTEM			
MAMMARY GLANDS	(40)	(43)	(40)
CARCINOMA			1 (2.5%) [1]
FIBROADENOMA	2 (5%) [2]	1 (2.3%) [1]	
LYMPHOID SYSTEM			
None			
MUSCULOSKELETAL SYSTEM			
None			
NERVOUS SYSTEM			
None			
RESPIRATORY SYSTEM			
None			
SPECIAL SENSES SYSTEM			
None			

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F1 Female : F1 Parental Females

Treatment Groups (ppm)

0

750

2500

URINARY SYSTEM

KIDNEYS

(40)

(43)

(40)

NEPHROBLASTOMA

1 (2.5%) [1]

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F2 Male

Treatment Groups (ppm)

0

750

2500

LYMPHOID SYSTEM

None

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

None

SPECIAL SENSES SYSTEM

None

URINARY SYSTEM

None

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F2 Female

Treatment Groups (ppm)

0

750

2500

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

None

SPECIAL SENSES SYSTEM

None

URINARY SYSTEM

None

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LEGEND

Number of animals examined given for each tissue. If none of the animals examined have the specific lesion then there is a blank for that dose group for that specific lesion. The exception to this is if statistical analysis is performed for a lesion and the control group has no animals with the lesion then a 0 is included for the control group on the table for that lesion.

Number of animals with observation reported with percent incidence in parentheses

Number of litters shown in square brackets for F1 and F2 animals

All trend and pairwise p-values are reported as one-sided.

Trend p-values are reported only for those organs that were fully examined in the control group plus two or more other dose groups. For organs that were fully examined in just the control and one other dose group, only the pairwise p-values are reported.

Statistical significance for the control group indicates a significant trend test

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group

* Statistically significant at $P \leq 0.05$

** Statistically significant at $P \leq 0.01$

**** END OF REPORT ****