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

C Number:

Study Gender:

PWG Approval Date

PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6 Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI

R92025B

Both

See web page for date of PWG Approval

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with L Abridged) (a) Test Compound: 4-Methylim CAS Number: 822-36-0	 Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI 		
	F0 Male			
		Treatment Groups	(ppm)	
	0	750	2500 5000	
Disposition Summary				
Animals Initially In Study	23	23	23	23
Scheduled Sacrifice				
Early Deaths			_	_
Unscheduled Sacrifice			3	2
Survivors Scheduled sacrifice, terminal (SD 15 - 178)	22	22	20	21
Animals Examined Microscopically	23 23	23 23	20 23	21
ALIMENTARY SYSTEM				
LIVER	(23)	(0)	(23)	(23)
CARDIOVASCULAR SYSTEM				
No Tissues/Organs Examined				
ENDOCRINE SYSTEM				
ADRENAL GLANDS	(23)	(0)	(23)	(23)
PITUITARY GLAND	(23)	(0)	(23)	(23)
THYROID GLANDS	(23)	(0)	(23)	(23)
GENERAL BODY SYSTEM				
No Tissues/Organs Examined				

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abridged) (a) Test Compound: 4-Methylim	nce Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6		 Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI 	
	F0 Male				
		Treatment Groups	(ppm)		
	0	750	2500	5000	
GENITAL SYSTEM					
COAGULATING GLANDS	(23)	(0)	(23)	(23)	
COWPERS GLANDS	(23)	(0)	(20)	(21)	
EPIDIDYMIS	(22)	(23)	(23)	(23)	
LEVATOR ANI PLUS BULBOCAVERNOSUS	MUSCLE (23)	(0)	(20)	(21)	
PREPUTIAL GLANDS	(9)	(6)	(1)	(4)	
PROSTATE	(23)	(23)	(23)	(23)	
SEMINAL VESICLES	(23)	(0)	(23)	(23)	
TESTIS	(22)	(23)	(23)	(23)	
HEMATOPOIETIC SYSTEM					
THYMUS	(23)	(0)	(23)	(23)	
INTEGUMENTARY SYSTEM					
No Tissues/Organs Examined					
LYMPHOID SYSTEM					
No Tissues/Organs Examined					
MUSCULOSKELETAL SYSTEM					
No Tissues/Organs Examined					
NERVOUS SYSTEM				-	
No Tissues/Organs Examined					
RESPIRATORY SYSTEM					
No Tissues/Organs Examined					
SPECIAL SENSES SYSTEM					
No Tissues/Organs Examined					

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abı Test Compo	Tast Compounds 4 Mothylimidazala		Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI		
	FO N	lale				
		Treatment Groups (ppm)				
		0	750		2500	5000
URINARY SYSTEM						
KIDNEYS		23)	(0)		(23)	(23)
No Systemic Lesions						

Experiment Number: R92025B	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions	Date Report Requested: 08/23/2018
Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	Time Report Requested: 14:02:52 Lab: RTI

Tumor Summary Data for F0 Male	Treatment Groups (ppm)					
	0	750	2500	5000		
Total Animals with Primary Neoplasms	0	0	0	0		
Total Primary Neoplasms	0	0	0	0		
Total Animals with Benign Neoplasms	0	0	0	0		
Total Benign Neoplasms	0	0	0	0		
Total Animals with Malignant Neoplasms	0	0	0	0		
Total Malignant Neoplasms	0	0	0	0		
Total Animals with Metastatic Neoplasms	0	0	0	0		
Total Metastatic Neoplasms	0	0	0	0		
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0	0		

Experiment Number: R92025B I Test Type: RACB	PA05R: Incidence Rates of Neoplastic Lesions with L Abridged) (a)	itter Incidence (Systemic Lesions	ions Date Report Requested: 08/2 Time Report Requested: 14:0				
Route: Dosing in Feed	Test Compound: 4-Methylin	Lab: RTI					
Species/Strain: Rat/Sprague-Dawley	CAS Number: 822-36	CAS Number: 822-36-6					
	F0 Female						
		Treatment Groups (ppm)					
	0	0 750 2500		5000			
Disposition Summary							
Animals Initially In Study	23	23	23	23			
Scheduled Sacrifice							
Early Deaths							
Euthanized, moribund	1	1	3	8			
Found Dead			1	1			
Unscheduled Sacrifice				2			
Survivors							
Scheduled sacrifice, terminal (LD 4, SD 28 - 2		22	19	12			
Animals Examined Microscopically	23	10	23	23			
ALIMENTARY SYSTEM							
LIVER	(23)	(3)	(23)	(23)			
CARDIOVASCULAR SYSTEM							
No Tissues/Organs Examined							
ADRENAL GLANDS	(23)	(1)	(23)	(23)			
PITUITARY GLAND	(23)	(1)	(23)	(23)			
THYROID GLANDS	(23)	(1)	(23)	(23)			
C-CELL ADENOMA			1 (4%)				
GENERAL BODY SYSTEM							
WHOLE BODY	(0)	(0)	(0)	(1)			

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abridged) (a) Test Compound: 4-Methylin	ncidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6		 Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI 			
	F0 Female						
		Treatment Groups (ppm)					
	0	750	2500	5000			
GENITAL SYSTEM							
CERVIX	(23)	(1)	(23)	(21)			
CLITORAL GLANDS	(3)	(4)	(1)	(1)			
OVARIES	(23)	(1)	(23)	(23)			
PLACENTA	(0)	(0)	(1)	(5)			
UTERUS	(23)	(3)	(23)	(23)			
HORN; ENDOMETRIUM; POLYP; STROMAL		1 (33%)					
VAGINA	(23)	(1)	(23)	(23)			
HEMATOPOIETIC SYSTEM							
LYMPH NODE, MEDIASTINAL	(3)	(0)	(0)	(0)			
THYMUS	(23)		(22)	(23)			
INTEGUMENTARY SYSTEM							
MAMMARY GLANDS	(1)	(2)	(0)	(0)			
FIBROADENOMA		2 (100%)	(-)	(-)			
SKIN	(2)	(0)	(1)	(0)			
LYMPHOID SYSTEM							
No Tissues/Organs Examined							
				·			
MUSCULOSKELETAL SYSTEM			(0)	(0)			
BONE LIMB	(1) (2)	(0) (1)	(0) (2)	(0) (0)			
	(2)	(1)	(∠)	(U)			
NERVOUS SYSTEM							
BRAIN	(0)	(0)	(0)	(2)			
RESPIRATORY SYSTEM							
NOSE	(0)	(0)	(1)	(0)			
SPECIAL SENSES SYSTEM							
No Tissues/Organs Examined							

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abrid Test Compoun	Test Compounds 4 Mathylimidazala		Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI	
	F0 Fem	ale			
		Treatment Groups (ppm)			
	0	750		2500	5000
URINARY SYSTEM					
KIDNEYS	(23	3) (1)		(23)	(23)
No Systemic Lesions					

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB Route: Dosing in Feed	Abridged) (a) Test Compound: 4-Methylimidazole	Time Report Requested: 14:02:52 Lab: RTI
Species/Strain: Rat/Sprague-Dawley	CAS Number: 822-36-6	

Tumor Summary Data for F0 Female	Treatment Groups (ppm)					
	0	750	2500	5000		
Total Animals with Primary Neoplasms	0	0	0	0		
Total Primary Neoplasms	0	0	0	0		
Total Animals with Benign Neoplasms	0	3	1	0		
Total Benign Neoplasms	0	3	1	0		
Total Animals with Malignant Neoplasms	0	1	1	0		
Total Malignant Neoplasms	0	1	1	0		
Total Animals with Metastatic Neoplasms	0	0	0	0		
Total Metastatic Neoplasms	0	0	0	0		
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0	0		

Experiment Number: R92025BPA05R: IncTest Type: RACBRoute: Dosing in FeedSpecies/Strain: Rat/Sprague-Dawley	idence Rates of Neoplastic Lesions with Litter Incidence (Systen Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6		Time Report Requested: 14:02:52		
	F1 Male: F1 NonParental Male				
	Treatment Groups (ppm)				
	0	750	2500		
Disposition Summary Animals Initially In Study Scheduled Sacrifice Early Deaths Survivors	49	56	20		
Scheduled sacrifice, terminal (PND 91 - 93) Animals Examined Microscopically	49 49	56 56	20 20		
Total number litters	18	22	8		
ALIMENTARY SYSTEM LIVER	(49)	(1)	(20)		
CARDIOVASCULAR SYSTEM No Tissues/Organs Examined					
ENDOCRINE SYSTEM ADRENAL GLANDS PITUITARY GLAND THYROID GLANDS	(49) (49) (49)	(1) (0) (0)	(20) (20) (20)		
GENERAL BODY SYSTEM No Tissues/Organs Examined					
GENITAL SYSTEM COAGULATING GLANDS COWPERS GLANDS EPIDIDYMIS LEVATOR ANI PLUS BULBOCAVERNOSUS MUSCLE PROSTATE	(49) (48) (49) (49) (49)	(0) (3) (56) (0) (56)	(20) (20) (20) (20) (20)		
SEMINAL VESICLES TESTIS	(49) (49)	(1) (56)	(20) (20)		

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesior Abridge Test Compound: 4 CAS Numbe	d) (a) 4-Methylimidazole	ystemic Lesions	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI	
	F1 Male: F1 NonPare	ental Male			
			Treatment Gro	ups (ppm)	
			750	750	
HEMATOPOIETIC SYSTEM THYMUS		(49)	(0)		(20)
INTEGUMENTARY SYSTEM SKIN		(1)	(1)		(1)
LYMPHOID SYSTEM No Tissues/Organs Examined					
MUSCULOSKELETAL SYSTEM LIMB		(5)	(1)		(0)
NERVOUS SYSTEM No Tissues/Organs Examined					
RESPIRATORY SYSTEM LUNGS		(1)	(1)		(0)
SPECIAL SENSES SYSTEM No Tissues/Organs Examined					
URINARY SYSTEM KIDNEYS		(49)	(1)		(20)
No Systemic Lesions					

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB	Abridged) (a) Test Compound: 4-Methylimidazole	Time Report Requested: 14:02:52
Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	CAS Number: 822-36-6	Lab: RTI

Tumor Summary Data for F1 Male F1 NonParental Male		Treatment Groups (ppm)		
	0	750	2500	
Total Animals with Primary Neoplasms	0	0	0	
Total Primary Neoplasms	0	0	0	
Total Animals with Benign Neoplasms	0	0	0	
Total Benign Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms	0	0	0	
Total Malignant Neoplasms	0	0	0	
Total Animals with Metastatic Neoplasms	0	0	0	
Total Metastatic Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0	

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	c Lesions	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI	
	F1 Female: F1 NonParent Female			
	Trea	Treatment Groups (ppm)		
	0	0 750 250		
Disposition Summary Animals Initially In Study Scheduled Sacrifice Early Deaths Survivors	47	58	27	
Scheduled sacrifice, terminal (PND 91 - 93) Animals Examined Microscopically	47	58 58	27 27	
Total number litters	17	22	12	
ALIMENTARY SYSTEM LIVER NOT OTHERWISE SPECIFIED; SARCOMA	(47)	(2) 1 (50%)	(27)	
CARDIOVASCULAR SYSTEM No Tissues/Organs Examined				
ENDOCRINE SYSTEM ADRENAL GLANDS PITUITARY GLAND THYROID GLANDS	(47) (47) (47)	(0) (0) (0)	(27) (27) (25)	
GENERAL BODY SYSTEM No Tissues/Organs Examined				
GENITAL SYSTEM CERVIX OVARIES	(47) (47) (47)	(0) (2)	(26) (27)	
UTERUS VAGINA	(47) (47)	(2) (0)	(27) (27)	

Experiment Number: R92025B	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions	Date Report Requested: 08/23/2018
Test Type: RACB	Abridged) (a)	Time Report Requested: 14:02:52
Route: Dosing in Feed	Test Compound: 4-Methylimidazole	Lab: RTI
Species/Strain: Rat/Sprague-Dawley	CAS Number: 822-36-6	

F1 Female: F1 NonParent Female			
	Treatment Groups (ppm)		
	0	750	2500
HEMATOPOIETIC SYSTEM			
LYMPH NODE	(1)	(0)	(0)
LYMPH NODE, MEDIASTINAL	(1)	(0)	(1)
SPLEEN	(2)	(1)	(0)
NOT OTHERWISE SPECIFIED; SARCOMA		1 (100%) [1]	
THYMUS	(47)	(0)	(27)
NTEGUMENTARY SYSTEM			
MAMMARY GLANDS	(47)	(0)	(27)
SKIN	(1)	(1)	(0)
YMPHOID SYSTEM			
No Tissues/Organs Examined			
/USCULOSKELETAL SYSTEM			
	(4)	(4)	(1)
PAW	(1)	(0)	(0)
IERVOUS SYSTEM			
No Tissues/Organs Examined			
RESPIRATORY SYSTEM			
No Tissues/Organs Examined			
SPECIAL SENSES SYSTEM			
No Tissues/Organs Examined			
JRINARY SYSTEM			
KIDNEYS	(47)	(58)	(27)
No Systemic Lesions			
No Systemic Lesions			

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB	Abridged) (a) Test Compound: 4-Methylimidazole	Time Report Requested: 14:02:52
Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	CAS Number: 822-36-6	Lab: RTI

Tumor Summary Data for F1 Female F1 NonParent Female		Treatment Groups (ppm)		
	0	750	2500	
Total Animals with Primary Neoplasms	0	0	0	
Total Primary Neoplasms	0	0	0	
Total Animals with Benign Neoplasms	0	0	0	
Total Benign Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms	0	1	0	
Total Malignant Neoplasms	0	2	0	
Total Animals with Metastatic Neoplasms	0	0	0	
Total Metastatic Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0	

Experiment Number: R92025B PA05R: Incider Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley Species/Strain: Rat/Sprague-Dawley	Toot Compound: 4 Mathematical and		Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI	
	F1 Male: F1 Parental Males			
		Treatment Groups (ppm)		
	0	750	2500	
Disposition Summary				
Animals Initially In Study	40	44	40	
Scheduled Sacrifice				
Early Deaths				
Euthanized, moribund			1	
Survivors				
Scheduled sacrifice, terminal (PND 218 - 224)	40	44	39	
Animals Examined Microscopically	40	44	40	
Total number litters	18	22	15	
ALIMENTARY SYSTEM				
LIVER	(40)	(0)	(40)	
CARDIOVASCULAR SYSTEM				
No Tissues/Organs Examined				
ENDOCRINE SYSTEM				
ADRENAL GLANDS	(40)	(0)	(40)	
NEPHROBLASTOMA; MALIGNANT WITH METASTASIS	(,	(0)	1 (3%) [1]	
PITUITARY GLAND	(40)	(0)	(40)	
THYROID GLANDS	(40)	(0)	(40)	
GENERAL BODY SYSTEM				
FAT	(2)	(0)	(0)	

Experiment Number: R92025BPA05R: InTest Type: RACBRoute: Dosing in FeedSpecies/Strain: Rat/Sprague-Dawley	cidence Rates of Neoplastic Lesions with Litter Incidence (S Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	ystemic Lesions	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI
	F1 Male: F1 Parental Males		
		Treatment Grou	ıps (ppm)
	0	750	2500
GENITAL SYSTEM			
COAGULATING GLANDS	(40)	(0)	(40)
COWPERS GLANDS	(40)	(0)	(40)
EPIDIDYMIS	(40)	(44)	(40)
LEVATOR ANI PLUS BULBOCAVERNOSUS MUSCLE	(40)	(0)	(40)
PREPUTIAL GLANDS	(3)	(1)	(0)
PROSTATE	(40)	(44)	(40)
SEMINAL VESICLES	(40)	(1)	(40)
TESTIS	(40)	(44)	(40)
HEMATOPOIETIC SYSTEM			
LYMPH NODE, MEDIASTINAL	(1)	(0)	(0)
LYMPH NODE, RENAL	(1)	(0)	(0)
SPLEEN	(3)	(0)	(1)
THYMUS	(40)	(0)	(40)
INTEGUMENTARY SYSTEM			
SKIN	(0)	(2)	(0)
SEBACEOUS GLAND; EPITHELIUM; ADENOMA		1 (50%)	
SUBCUTANEOUS; LIPOMA		1 (50%)	
SKIN, ABDOMINAL	(3)	(0)	(0)
LYMPHOID SYSTEM			
No Tissues/Organs Examined			
V	· · · · · · · · · · · · · · · · · · ·		
MUSCULOSKELETAL SYSTEM			14
DIAPHRAGM	(0)	(0)	(1) (1)
LIMB	(1)	(0)	(1)
NERVOUS SYSTEM			
No Tissues/Organs Examined			

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI	
	F1 Male: F1 Parental Males		
	Treatment Gro	pups (ppm)	
	0 750	2500	
RESPIRATORY SYSTEM No Tissues/Organs Examined			
SPECIAL SENSES SYSTEM No Tissues/Organs Examined			
URINARY SYSTEM KIDNEYS NEPHROBLASTOMA	(40) (6)	(40) 1 (3%) [1]	
SYSTEMIC LESIONS Multiple Organ(a) LYMPHOMA	(1) (0) 1 (100%) [1]	(0)	

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB	Abridged) (a)	Time Report Requested: 14:02:52
Route: Dosing in Feed	Test Compound: 4-Methylimidazole CAS Number: 822-36-6	Lab: RTI
Species/Strain: Rat/Sprague-Dawley		

Tumor Summary Data for F1 Male F1 Parental Males	Treatment Groups (ppm)		
	0	750	2500
Total Animals with Primary Neoplasms	0	0	0
Total Primary Neoplasms	0	0	0
Total Animals with Benign Neoplasms	0	2	0
Total Benign Neoplasms	0	2	0
Total Animals with Malignant Neoplasms	1	0	1
Total Malignant Neoplasms	5	0	2
Total Animals with Metastatic Neoplasms	0	0	1
Total Metastatic Neoplasms	0	0	1
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley		tic Lesions with Litter Incidenc Abridged) (a) npound: 4-Methylimidazole S Number: 822-36-6	e (Systemic Lesions	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI
	F1 Female:	F1 Parental Females		
			Treatment Gro	ups (ppm)
		0	750	2500
Disposition Summary				
Animals Initially In Study		40	44	40
Scheduled Sacrifice				
Early Deaths				
Euthanized, moribund		2	3	6
Found Dead			1	1
Unscheduled Sacrifice		1	1	1
Survivors				20
Scheduled sacrifice, terminal (LD 26 - 28,	, PND 246 - 251)	37 40	39	32
Animals Examined Microscopically			43	40
Total number litters		19	22	15
ALIMENTARY SYSTEM				
LIVER		(40)	(43)	(40)
CARDIOVASCULAR SYSTEM				
No Tissues/Organs Examined				
ENDOCRINE SYSTEM				
ADRENAL GLANDS		(40)	(43)	(40)
PITUITARY GLAND		(39)	(43)	(40)
THYROID GLANDS		(40)	(43)	(40)
C-CELL; ADENOMA				1 (3%) [1]

No Tissues/Organs Examined

Experiment Number: R92025B PA05R: In	cidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions	Date Report Requested: 08/23/2018
Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	Time Report Requested: 14:02:52 Lab: RTI

		Treatment Groups (ppm)	Treatment Groups (ppm)		
	0	750	2500		
GENITAL SYSTEM					
CERVIX	(40)	(42)	(40)		
CLITORAL GLANDS	(3)	(0)	(0)		
OVARIES	(40)	(43)	(40)		
PLACENTA	(0)	(1)	(0)		
UTERUS	(40)	(43)	(40)		
ENDOMETRIUM; POLYP; STROMAL	1 (3%) [1]				
VAGINA	(40)	(43)	(40)		
HEMATOPOIETIC SYSTEM					
LYMPH NODE, MEDIASTINAL	(1)	(1)	(0)		
LYMPH NODE, MESENTERIC	(0)	(1)	(0)		
SPLEEN	(0)	(1)	(0)		
THYMUS	(40)	(42)	(40)		
INTEGUMENTARY SYSTEM					
MAMMARY GLANDS	(40)	(43)	(40)		
CARCINOMA	(10)	(10)	1 (3%) [1]		
FIBROADENOMA	2 (5%) [2]	1 (2%) [1]	1 (070) [1]		
SKIN	(1)	(2)	(1)		
LYMPHOID SYSTEM					
No Tissues/Organs Examined					
MUSCULOSKELETAL SYSTEM					
LIMB	(15)	(2)	(1)		
NERVOUS SYSTEM					
No Tissues/Organs Examined					
RESPIRATORY SYSTEM					
No Tissues/Organs Examined					

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	Abridged) (a)		Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI	
	F1 Female: F1 Pare	ental Females		
		Treatment Groups (ppm)		
		0	750	2500
SPECIAL SENSES SYSTEM No Tissues/Organs Examined				
URINARY SYSTEM				
KIDNEYS NEPHROBLASTOMA URINARY BLADDER		(40) 1 (3%) [1] (1)	(43)	(40)
		(1)	(0)	(0)
SYSTEMIC LESIONS Multiple Organ(a) LYMPHOMA		(0)	(1) 1 (1009	(0)

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB	Abridged) (a) Test Compound: 4-Methylimidazole	Time Report Requested: 14:02:52
Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	CAS Number: 822-36-6	Lab: RTI

Tumor Summary Data for F1 Female F1 Parental Females		Treatment Groups (ppm)		
	0	750	2500	
Total Animals with Primary Neoplasms	0	0	0	
Total Primary Neoplasms	0	0	0	
Total Animals with Benign Neoplasms	3	1	1	
Total Benign Neoplasms	3	1	1	
Total Animals with Malignant Neoplasms	1	1	1	
Total Malignant Neoplasms	1	4	1	
Total Animals with Metastatic Neoplasms	0	0	0	
Total Metastatic Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0	

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic I Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6		port Requested: 14:02:52
	F2 Male		
	Treatm	nent Groups (ppm)
	0	750	2500
Disposition Summary Animals Initially In Study Scheduled Sacrifice Early Deaths Survivors	107	132	69
Scheduled sacrifice, terminal (PND 28) Animals Examined Microscopically	107 10	132 5	69
Total number litters ALIMENTARY SYSTEM No Tissues/Organs Examined	7	4	
CARDIOVASCULAR SYSTEM No Tissues/Organs Examined			
ENDOCRINE SYSTEM No Tissues/Organs Examined			
GENERAL BODY SYSTEM No Tissues/Organs Examined			
GENITAL SYSTEM TESTIS	(4)	(1)	(0)
HEMATOPOIETIC SYSTEM No Tissues/Organs Examined			
INTEGUMENTARY SYSTEM No Tissues/Organs Examined			
LYMPHOID SYSTEM No Tissues/Organs Examined			

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI
	F2 Male	
	Treatment Gro	pups (ppm)
	0 750	2500
MUSCULOSKELETAL SYSTEM No Tissues/Organs Examined		
NERVOUS SYSTEM No Tissues/Organs Examined		
RESPIRATORY SYSTEM No Tissues/Organs Examined		
SPECIAL SENSES SYSTEM No Tissues/Organs Examined		
URINARY SYSTEM KIDNEYS	(6) (4) (0)
No Systemic Lesions		

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB	Abridged) (a)	Time Report Requested: 14:02:52
Route: Dosing in Feed	Test Compound: 4-Methylimidazole CAS Number: 822-36-6	Lab: RTI
Species/Strain: Rat/Sprague-Dawley		

Tumor Summary Data for F2 Male		Treatment Groups (ppm)		
	0	750	2500	
Total Animals with Primary Neoplasms	0	0	0	
Total Primary Neoplasms	0	0	0	
Total Animals with Benign Neoplasms	0	0	0	
Total Benign Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms	0	0	0	
Total Malignant Neoplasms	0	0	0	
Total Animals with Metastatic Neoplasms	0	0	0	
Total Metastatic Neoplasms	0	0	0	
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0	

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	c Lesions	Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI
	F2 Female		
	Trea	tment Grou	ups (ppm)
	0	750	2500
Disposition Summary Animals Initially In Study Scheduled Sacrifice Early Deaths Survivors	98	132	76
Scheduled sacrifice, terminal (PND 28) Animals Examined Microscopically	98	132	76
ALIMENTARY SYSTEM No Tissues/Organs Examined			
CARDIOVASCULAR SYSTEM No Tissues/Organs Examined			
ENDOCRINE SYSTEM No Tissues/Organs Examined			
GENERAL BODY SYSTEM No Tissues/Organs Examined			
GENITAL SYSTEM No Tissues/Organs Examined			
HEMATOPOIETIC SYSTEM No Tissues/Organs Examined			
INTEGUMENTARY SYSTEM No Tissues/Organs Examined			
LYMPHOID SYSTEM No Tissues/Organs Examined			
MUSCULOSKELETAL SYSTEM No Tissues/Organs Examined			

Experiment Number: R92025B Test Type: RACB Route: Dosing in Feed Species/Strain: Rat/Sprague-Dawley	PA05R: Incidence Rates of Neoplastic Lesions with Litter Incidence (Systemic Lesions Abridged) (a) Test Compound: 4-Methylimidazole CAS Number: 822-36-6	 Date Report Requested: 08/23/2018 Time Report Requested: 14:02:52 Lab: RTI 	
	F2 Female		
	Treatment Gro	ups (ppm)	
	0 750	2500	
NERVOUS SYSTEM No Tissues/Organs Examined			
RESPIRATORY SYSTEM No Tissues/Organs Examined			
SPECIAL SENSES SYSTEM No Tissues/Organs Examined			
URINARY SYSTEM No Tissues/Organs Examined			
No Systemic Lesions			

Experiment Number: R92025B		Date Report Requested: 08/23/2018
Test Type: RACB	Test Compound: 4 Mathylimidazala	Time Report Requested: 14:02:52
Route: Dosing in Feed		Lab: RTI
Species/Strain: Rat/Sprague-Dawley		

Tumor Summary Data for F2 Female	Treatment Groups (ppm)		
	0	750	2500
Total Animals with Primary Neoplasms	0	0	0
Total Primary Neoplasms	0	0	0
Total Animals with Benign Neoplasms	0	0	0
Total Benign Neoplasms	0	0	0
Total Animals with Malignant Neoplasms	0	0	0
Total Malignant Neoplasms	0	0	0
Total Animals with Metastatic Neoplasms	0	0	0
Total Metastatic Neoplasms	0	0	0
Total Animals with Malignant Neoplasms Uncertain Primary Site	0	0	0

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

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.

Number of animals with observation reported with percent incidence in parentheses

(a) Systemic lesions are included once in the total lesion count regardless of how many times they occurred in a single animal

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

Phase day range of terminal sacrifice shown in parentheses in disposition summary

SD – Study Day; GD – Gestation Day; LD – Lactation Day; PND – Postnatal Day, adults post-weaning

** END OF REPORT **