

Experiment Number: 99037-03
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**
Test Compound: alpha/beta Thujone mixture
CAS Number: 76231-76-0

Date Report Requested: 10/20/2014
Time Report Requested: 16:22:12
First Dose M/F: NA / NA
Lab: SRI

C Number:	C99037B
Lock Date:	04/04/2003
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	NONE

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F 344/N Rat MALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Disposition Summary												
Animals Initially In Study	10		10		10		10		10		10	
Early Deaths												
Natural Death									2		7	
Survivors												
Natural Death											1	
Terminal Sacrifice	10		10		10		10		8		2	
Animals Examined Microscopically	10		10		10		10		10		10	
ALIMENTARY SYSTEM												
Esophagus	(10)		(0)		(0)		(0)		(10)		(10)	
Intestine Large, Cecum	(10)		(0)		(0)		(0)		(10)		(9)	
Hemorrhage											1 [2.0]	
Inflammation, Chronic Active											1 [2.0]	
Intestine Large, Colon	(10)		(0)		(0)		(0)		(9)		(9)	
Intestine Large, Rectum	(10)		(0)		(0)		(0)		(10)		(9)	
Intestine Small, Duodenum	(10)		(0)		(0)		(0)		(10)		(9)	
Intestine Small, Ileum	(10)		(0)		(0)		(0)		(8)		(8)	
Intestine Small, Jejunum	(10)		(0)		(0)		(0)		(8)		(6)	
Liver	(10)		(3)		(0)		(2)		(10)		(10)	
Clear Cell Focus									1 [1.0]			
Hematopoietic Cell Proliferation	3 [1.0]								2 [1.0]		1 [1.0]	
Hepatodiaphragmatic Nodule	4		3				1		1		2	
Inflammation, Chronic							1 [1.0]		1 [1.0]		1 [2.0]	
Vacuolization Cytoplasmic	5 [1.0]								3 [1.0]			
Mesentery	(1)		(0)		(0)		(0)		(0)		(0)	
Accessory Spleen	1 [1.0]											
Pancreas	(10)		(0)		(0)		(0)		(10)		(10)	
Acinus, Vacuolization Cytoplasmic									1 [1.0]		2 [1.5]	

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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F 344/N Rat MALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Atrophy												1 [1.0]
Salivary Glands	(10)		(0)		(0)		(0)		(10)			(10)
Parotid Gl, Basophilic Focus	9 [1.2]								4 [1.3]			5 [1.2]
Stomach, Forestomach	(10)		(10)		(10)		(10)		(10)			(10)
Degeneration, Cystic									1 [2.0]			1 [3.0]
Hyperplasia, Squamous									1 [2.0]			1 [2.0]
Stomach, Glandular	(10)		(10)		(10)		(10)		(10)			(10)
Edema									1 [2.0]			1 [2.0]
Erosion, Focal												1 [2.0]
Hemorrhage									1 [2.0]			1 [2.0]
Inflammation, Chronic									1 [2.0]			
Pigmentation												1 [2.0]
Ulcer									1 [3.0]			1 [2.0]
CARDIOVASCULAR SYSTEM												
Heart	(10)		(0)		(0)		(0)		(10)			(10)
Cardiomyopathy	6 [1.2]								8 [1.3]			2 [1.0]
ENDOCRINE SYSTEM												
Adrenal Cortex	(10)		(10)		(10)		(10)		(10)			(10)
Accessory Adrenal Cortical Nodule												1 [2.0]
Hypertrophy									1 [3.0]			1 [1.0]
Adrenal Medulla	(10)		(0)		(10)		(10)		(10)			(10)
Parathyroid Gland	(10)		(0)		(0)		(0)		(10)			(10)
Pituitary Gland	(10)		(0)		(10)		(10)		(10)			(10)
Angiectasis									1 [3.0]			1 [2.0]
Pars Distalis, Atrophy									1 [2.0]			2 [2.5]
Pars Distalis, Hemorrhage												1 [3.0]
Pars Distalis, Necrosis												1 [4.0]
Rathkes Cleft, Dilatation	1 [1.0]								1 [1.0]			3 [1.0]
												4 [1.8]

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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First Dose M/F: NA / NA

Lab: SRI

F 344/N Rat MALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Thyroid Gland	(10)		(0)		(0)		(0)		(10)		(10)	
Ultimobranchial Cyst	1	[1.0]									1	[1.0]
GENERAL BODY SYSTEM												
None												
GENITAL SYSTEM												
Epididymis	(10)		(0)		(0)		(0)		(10)		(10)	
Preputial Gland	(10)		(0)		(0)		(0)		(10)		(10)	
Prostate	(10)		(0)		(0)		(0)		(10)		(10)	
Infiltration Cellular, Mixed Cell	1	[2.0]										
Seminal Vesicle	(10)		(0)		(0)		(0)		(10)		(10)	
Testes	(10)		(0)		(0)		(0)		(10)		(10)	
HEMATOPOIETIC SYSTEM												
Bone Marrow	(10)		(0)		(0)		(0)		(10)		(10)	
Lymph Node	(0)		(0)		(0)		(0)		(0)		(2)	
Hyperplasia, Lymphoid											1	[2.0]
Pancreatic, Hemorrhage											1	[1.0]
Lymph Node, Mandibular	(1)		(0)		(0)		(0)		(0)		(0)	
Lymph Node, Mesenteric	(10)		(0)		(0)		(0)		(10)		(10)	
Spleen	(10)		(0)		(0)		(0)		(10)		(10)	
Congestion											4	[2.3]
Pigmentation, Hemosiderin											1	[2.0]
Thymus	(10)		(0)		(0)		(0)		(10)		(10)	
Hemorrhage	1	[2.0]							4	[1.3]	6	[1.8]
INTEGUMENTARY SYSTEM												
Mammary Gland	(10)		(0)		(0)		(0)		(7)		(8)	
Skin	(10)		(0)		(0)		(0)		(10)		(10)	
MUSCULOSKELETAL SYSTEM												

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Lab: SRI

F 344/N Rat MALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Bone	(10)		(0)		(0)		(0)		(10)		(10)	
Skeletal Muscle	(10)		(0)		(0)		(0)		(2)		(10)	
NERVOUS SYSTEM												
Brain	(10)		(10)		(10)		(10)		(10)		(10)	
Congestion									2 [2.0]		6 [1.5]	
Hemorrhage									2 [2.0]		4 [1.5]	
Pigmentation	1 [1.0]											
Peripheral Nerve	(10)		(0)		(0)		(0)		(2)		(10)	
Spinal Cord	(10)		(0)		(0)		(0)		(2)		(10)	
RESPIRATORY SYSTEM												
Lung	(10)		(0)		(0)		(0)		(10)		(10)	
Congestion									1 [2.0]		8 [1.6]	
Hemorrhage	7 [1.1]								4 [1.3]			
Inflammation, Acute											1 [1.0]	
Inflammation, Chronic	1 [1.0]											
Nose	(10)		(0)		(0)		(0)		(10)		(10)	
Olfactory Epi, Degeneration									1 [1.0]			
Trachea	(10)		(0)		(0)		(0)		(10)		(10)	
SPECIAL SENSES SYSTEM												
Eye	(10)		(0)		(0)		(0)		(10)		(10)	
Harderian Gland	(10)		(0)		(0)		(0)		(10)		(10)	
Hemorrhage	1 [2.0]											
Inflammation, Acute	1 [1.0]											
URINARY SYSTEM												
Kidney	(10)		(10)		(10)		(10)		(10)		(10)	
Nephropathy	8 [1.0]		10 [1.0]		10 [1.0]		10 [1.2]		9 [1.1]		9 [1.4]	
Renal Tubule, Mineralization	1 [1.0]		1 [1.0]		2 [1.0]		1 [1.0]		1 [1.0]		3 [1.0]	

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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F 344/N Rat MALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Renal Tubule, Necrosis											1	[2.0]
Urinary Bladder	(10)		(0)		(0)		(0)		(10)		(10)	

END OF MALE DATA

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F 344/N Rat FEMALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Disposition Summary												
Animals Initially In Study	10		10		10		10		10		10	
Early Deaths												
Natural Death									8		9	
Survivors												
Terminal Sacrifice	10		10		10		10		2		1	
Animals Examined Microscopically	10		10		10		10		10		10	
ALIMENTARY SYSTEM												
Esophagus	(10)		(0)		(0)		(10)		(10)		(10)	
Intestine Large, Cecum	(10)		(0)		(0)		(10)		(9)		(10)	
Intestine Large, Colon	(10)		(0)		(0)		(10)		(10)		(10)	
Hemorrhage									1 [1.0]			
Intestine Large, Rectum	(10)		(0)		(0)		(10)		(10)		(10)	
Intestine Small, Duodenum	(10)		(0)		(0)		(10)		(10)		(10)	
Intestine Small, Ileum	(10)		(0)		(0)		(10)		(8)		(9)	
Intestine Small, Jejunum	(10)		(0)		(0)		(10)		(9)		(10)	
Liver	(10)		(1)		(2)		(10)		(10)		(10)	
Hematopoietic Cell Proliferation	2 [1.0]						4 [1.0]		2 [1.5]		1 [1.0]	
Hepatodiaphragmatic Nodule	1		1		2		2		1			
Inflammation, Chronic	6 [1.2]											
Necrosis									1 [1.0]			
Vacuolization Cytoplasmic									2 [1.5]			
Pancreas	(10)		(0)		(0)		(10)		(10)		(10)	
Acinus, Vacuolization Cytoplasmic									1 [2.0]			
Inflammation, Chronic											1 [1.0]	
Salivary Glands	(10)		(0)		(0)		(10)		(10)		(10)	
Parotid GI, Basophilic Focus	4 [1.0]						6 [1.5]		3 [1.0]		9 [1.2]	
Parotid GI, Necrosis, Focal	1 [1.0]											

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F 344/N Rat FEMALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Stomach, Forestomach	(10)		(10)		(10)		(10)		(10)		(10)	
Degeneration, Cystic									1 [2.0]		1 [2.0]	
Edema									1 [2.0]			
Stomach, Glandular	(10)		(10)		(10)		(10)		(10)		(10)	
Edema									1 [2.0]		3 [2.0]	
Hemorrhage											2 [1.0]	
Infiltration Cellular, Eosinophil							1 [2.0]					
Inflammation, Chronic							1 [2.0]					
Mineralization							1 [1.0]					
CARDIOVASCULAR SYSTEM												
Heart	(10)		(0)		(0)		(10)		(10)		(10)	
Cardiomyopathy	2 [1.0]						1 [1.0]				2 [1.0]	
ENDOCRINE SYSTEM												
Adrenal Cortex	(10)		(10)		(10)		(10)		(10)		(10)	
Adrenal Medulla	(10)		(10)		(10)		(10)		(10)		(10)	
Parathyroid Gland	(10)		(0)		(0)		(9)		(10)		(8)	
Pituitary Gland	(10)		(10)		(10)		(10)		(10)		(10)	
Angiectasis									1 [3.0]		1 [2.0]	
Congestion							1 [2.0]					
Pars Distalis, Atrophy									3 [2.7]		3 [3.0]	
Pars Distalis, Necrosis							1 [4.0]		1 [4.0]			
Rathkes Cleft, Dilatation					1 [1.0]		5 [1.0]		4 [1.8]		5 [2.0]	
Thyroid Gland	(10)		(0)		(0)		(10)		(10)		(10)	
Ectopic Thymus							1		1			
GENERAL BODY SYSTEM												
None												
GENITAL SYSTEM												

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F 344/N Rat FEMALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Clitoral Gland	(10)		(0)		(0)		(10)		(10)		(10)	
Ovary	(10)		(10)		(10)		(10)		(10)		(10)	
Cyst	2		2		1		1					
Uterus	(10)		(3)		(1)		(10)		(10)		(10)	
Dilatation	2 [2.0]		2 [1.0]		1 [2.0]		1 [2.0]				1 [1.0]	
Vagina	(10)		(10)		(10)		(10)		(10)		(10)	
Cyst			1									
HEMATOPOIETIC SYSTEM												
Bone Marrow	(10)		(0)		(0)		(10)		(10)		(10)	
Lymph Node	(0)		(1)		(3)		(2)		(0)		(1)	
Hemorrhage					1 [2.0]		1 [2.0]					
Hyperplasia, Lymphoid			1 [1.0]									
Pancreatic, Hemorrhage							2 [2.0]				1 [2.0]	
Pancreatic, Infiltration Cellular, Histiocyte					2 [2.0]							
Lymph Node, Mesenteric	(10)		(0)		(0)		(10)		(10)		(10)	
Hyperplasia, Lymphoid							1 [2.0]		1 [2.0]			
Spleen	(10)		(0)		(0)		(10)		(10)		(10)	
Atrophy									1 [2.0]		1 [2.0]	
Thymus	(10)		(0)		(0)		(10)		(10)		(10)	
Hemorrhage									4 [1.0]		4 [1.5]	
INTEGUMENTARY SYSTEM												
Mammary Gland	(10)		(0)		(0)		(10)		(10)		(10)	
Skin	(10)		(0)		(0)		(10)		(10)		(10)	
MUSCULOSKELETAL SYSTEM												
Bone	(10)		(0)		(0)		(10)		(10)		(10)	
Skeletal Muscle	(10)		(0)		(0)		(0)		(2)		(10)	
NERVOUS SYSTEM												

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F 344/N Rat FEMALE	0	MG/KG	12.5	MG/KG	25	MG/KG	50	MG/KG	75	MG/KG	100	MG/KG
Brain	(10)		(10)		(10)		(10)		(10)		(10)	
Congestion									3 [1.7]		8 [1.5]	
Hemorrhage									4 [1.5]		3 [2.0]	
Pigmentation					1 [1.0]		6 [1.2]		5 [1.0]		4 [1.3]	
Peripheral Nerve	(10)		(0)		(0)		(0)		(2)		(10)	
Spinal Cord	(10)		(0)		(0)		(0)		(4)		(10)	
Congestion											2 [2.0]	
RESPIRATORY SYSTEM												
Lung	(10)		(0)		(0)		(10)		(10)		(10)	
Alveolus, Infiltration Cellular, Histiocyte, Focal	1 [1.0]								1 [1.0]			
Congestion									2 [2.0]		4 [1.8]	
Hemorrhage	8 [1.3]						3 [1.0]					
Nose	(10)		(0)		(0)		(10)		(10)		(10)	
Trachea	(10)		(0)		(0)		(10)		(10)		(10)	
SPECIAL SENSES SYSTEM												
Eye	(10)		(0)		(0)		(10)		(10)		(10)	
Harderian Gland	(10)		(0)		(0)		(10)		(10)		(10)	
URINARY SYSTEM												
Kidney	(10)		(10)		(10)		(10)		(10)		(10)	
Nephropathy					1 [1.0]		3 [2.0]		2 [1.0]		3 [1.0]	
Renal Tubule, Degeneration											1 [1.0]	
Renal Tubule, Mineralization	3 [1.0]		8 [1.0]		8 [1.0]		8 [1.0]		10 [1.0]		9 [1.0]	
Renal Tubule, Necrosis									1 [2.0]			
Urinary Bladder	(10)		(0)		(0)		(10)		(10)		(10)	

**** END OF REPORT ****

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b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)