

**Experiment Number:** 99023-01  
**Test Type:** 90-DAY  
**Species/Strain:** Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

**Test Compound:** beta-Myrcene  
**CAS Number:** 123-35-3

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 12:46:52  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**C Number:** C99023  
**Lock Date:** 10/17/2001  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Both  
**PWG Approval Date** NONE

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Dosing Accident			1	1		
Moribund Sacrifice						2
Natural Death					2	8
Survivors						
Terminal Sacrifice	10	10	9	9	8	
Animals Examined Microscopically	10	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(10)	(0)	(1)	(1)	(10)	(10)
Perforation			1 [4.0]			
Intestine Large, Cecum	(10)	(0)	(1)	(1)	(10)	(10)
Intestine Large, Colon	(10)	(0)	(1)	(1)	(10)	(10)
Intestine Large, Rectum	(10)	(0)	(1)	(1)	(10)	(10)
Intestine Small, Duodenum	(10)	(0)	(1)	(1)	(10)	(10)
Intestine Small, Ileum	(10)	(0)	(1)	(1)	(10)	(10)
Intestine Small, Jejunum	(10)	(0)	(1)	(1)	(10)	(10)
Atrophy					2 [2.0]	
Liver	(10)	(0)	(2)	(1)	(10)	(10)
Fibrosis, Focal					1 [1.0]	
Hepatodiaphragmatic Nodule	1		1			
Inflammation, Chronic					1 [1.0]	
Oral Mucosa	(0)	(0)	(0)	(0)	(2)	(0)
Inflammation, Chronic					1 [2.0]	
Pancreas	(10)	(0)	(1)	(1)	(10)	(10)
Acinus, Atrophy	1 [1.0]				1 [1.0]	
Salivary Glands	(10)	(0)	(1)	(1)	(10)	(10)

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)

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
Stomach, Forestomach	(10)	(0)	(1)	(10)	(10)	(10)
Inflammation, Acute					1 [1.0]	9 [2.3]
Ulcer						5 [2.4]
Stomach, Glandular	(10)	(0)	(1)	(1)	(10)	(10)
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(10)	(0)	(1)	(1)	(10)	(10)
Heart	(10)	(0)	(1)	(1)	(10)	(10)
Inflammation, Chronic Active	5 [1.0]					
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(1)	(1)	(10)	(10)
Hemorrhage					1 [2.0]	
Hyperplasia, Focal	2 [1.0]					
Adrenal Medulla	(10)	(0)	(1)	(1)	(10)	(10)
Islets, Pancreatic	(10)	(0)	(1)	(1)	(10)	(10)
Parathyroid Gland	(10)	(0)	(1)	(1)	(9)	(9)
Pituitary Gland	(10)	(0)	(1)	(1)	(10)	(10)
Thyroid Gland	(10)	(0)	(1)	(1)	(10)	(10)
<b>GENERAL BODY SYSTEM</b>						
None						
<b>GENITAL SYSTEM</b>						
Epididymis	(10)	(0)	(1)	(1)	(10)	(10)
Degeneration					1 [4.0]	
Preputial Gland	(10)	(0)	(1)	(1)	(10)	(10)
Inflammation, Suppurative						1 [4.0]
Prostate	(10)	(0)	(1)	(1)	(10)	(10)
Seminal Vesicle	(10)	(0)	(1)	(1)	(10)	(9)
Atrophy					1 [4.0]	

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)

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

<b>F 344/N Rat MALE</b>	<b>0 G/KG</b>	<b>0.25 G/KG</b>	<b>0.5 G/KG</b>	<b>1.0 G/KG</b>	<b>2.0 G/KG</b>	<b>4.0 G/KG</b>
Testes	(10)	(0)	(1)	(1)	(10)	(10)
Germinal Epith, Degeneration					1 [2.0]	
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(10)	(0)	(1)	(1)	(10)	(10)
Lymph Node	(1)	(2)	(4)	(1)	(0)	(0)
Deep Cervical, Ectasia	1 [2.0]	2 [3.0]	4 [1.5]	1 [2.0]		
Deep Cervical, Hyperplasia, Lymphoid	1 [3.0]	2 [2.0]	4 [2.8]	1 [3.0]		
Lymph Node, Mandibular	(0)	(0)	(0)	(1)	(0)	(0)
Lymph Node, Mesenteric	(10)	(0)	(1)	(1)	(10)	(10)
Atrophy				1 [1.0]	6 [1.7]	
Spleen	(10)	(10)	(10)	(10)	(10)	(10)
Atrophy			1 [2.0]		10 [1.8]	10 [4.0]
Thymus	(10)	(0)	(1)	(10)	(9)	(10)
Atrophy						1 [3.0]
Necrosis					1 [3.0]	9 [3.8]
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(1)	(1)	(10)	(10)
Skin	(10)	(0)	(1)	(1)	(10)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(1)	(1)	(10)	(10)
Skeletal Muscle	(0)	(0)	(1)	(0)	(0)	(0)
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(1)	(1)	(10)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(1)	(1)	(10)	(10)
Bronchus, Infiltration Cellular, Polymorphnuclr					1 [2.0]	

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)

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
Congestion				1 [2.0]		
Inflammation, Chronic	5 [1.0]				3 [1.3]	
Inflammation, Suppurative					1 [3.0]	
Metaplasia, Osseous	1 [1.0]					
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Inflammation, Chronic			1 [1.0]	6 [1.0]	8 [1.1]	
Inflammation, Suppurative				1 [1.0]	3 [1.0]	7 [2.0]
Metaplasia, Squamous						2 [1.5]
Olfactory Epi, Degeneration				2 [1.0]	8 [2.6]	9 [3.6]
Respirat Epith, Necrosis						9 [3.6]
Trachea	(10)	(0)	(1)	(1)	(10)	(10)
<b>SPECIAL SENSES SYSTEM</b>						
Eye	(10)	(0)	(1)	(1)	(10)	(10)
Antr Chamber, Cornea, Inflammation, Suppurative					1 [3.0]	
Harderian Gland	(10)	(10)	(10)	(10)	(9)	(10)
Pigmentation, Porphyrin	1 [1.0]	3 [1.0]	7 [1.0]	8 [1.1]	9 [1.3]	10 [3.7]
Lacrimal Gland	(0)	(0)	(0)	(0)	(1)	(0)
Zymbal's Gland	(0)	(0)	(0)	(0)	(1)	(0)
<b>URINARY SYSTEM</b>						
Kidney	(7)	(10)	(9)	(10)	(10)	(10)
Nephropathy	7 [1.0]	10 [1.0]	9 [1.3]	8 [1.0]	9 [1.9]	1 [1.0]
Nephrosis			1 [1.0]	10 [1.0]	9 [2.7]	
Renal Tubule, Accumulation, Hyaline Droplet		10 [2.0]	9 [2.4]	10 [2.1]		
Renal Tubule, Degeneration		10 [1.0]	9 [1.1]			
Renal Tubule, Necrosis					1 [4.0]	1 [2.0]
Urinary Bladder	(10)	(0)	(1)	(1)	(10)	(10)

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)

**Experiment Number:** 99023-01

**Test Type:** 90-DAY

**Species/Strain:** Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]**

**Test Compound:** beta-Myrcene

**CAS Number:** 123-35-3

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 12:46:52

**First Dose M/F:** NA / NA

**Lab:** BAT

\*\*\*END OF MALE DATA\*\*\*

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)

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Dosing Accident				1		1
Moribund Sacrifice					2	1
Natural Death					2	8
Survivors						
Terminal Sacrifice	10	10	10	9	6	
Animals Examined Microscopically	10	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(10)	(0)	(0)	(1)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(1)	(10)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(1)	(10)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(1)	(10)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(1)	(10)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(1)	(10)	(10)
Atrophy					1 [3.0]	
Intestine Small, Jejunum	(10)	(0)	(0)	(1)	(10)	(10)
Atrophy					1 [3.0]	
Liver	(10)	(1)	(1)	(2)	(10)	(10)
Bile Duct, Hyperplasia					1 [1.0]	
Fibrosis, Focal				1 [1.0]		
Hepatodiaphragmatic Nodule		1	1	1	1	
Inflammation, Chronic	1 [1.0]			1 [1.0]		
Mesentery	(0)	(1)	(0)	(0)	(0)	(0)
Fat, Necrosis		1 [2.0]				
Pancreas	(10)	(0)	(0)	(1)	(10)	(10)
Acinus, Atrophy, Focal	1 [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)

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
Salivary Glands	(10)	(0)	(0)	(1)	(10)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(10)	(10)	(10)
Inflammation, Acute					4 [1.8]	10 [2.8]
Ulcer					2 [2.5]	3 [2.3]
Stomach, Glandular	(10)	(0)	(0)	(1)	(10)	(10)
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(10)	(0)	(0)	(1)	(10)	(10)
Heart	(10)	(0)	(0)	(1)	(10)	(10)
Inflammation, Chronic Active	1 [1.0]					
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(1)	(10)	(10)
Adrenal Medulla	(10)	(0)	(0)	(1)	(10)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(1)	(10)	(10)
Parathyroid Gland	(9)	(0)	(0)	(1)	(10)	(10)
Pituitary Gland	(10)	(0)	(0)	(1)	(10)	(10)
Thyroid Gland	(10)	(0)	(0)	(1)	(10)	(10)
<b>GENERAL BODY SYSTEM</b>						
None						
<b>GENITAL SYSTEM</b>						
Clitoral Gland	(10)	(0)	(0)	(1)	(10)	(10)
Ovary	(10)	(0)	(0)	(1)	(10)	(10)
Uterus	(10)	(0)	(0)	(1)	(10)	(10)
Endometrium, Hyperplasia, Cystic	1 [1.0]				1 [1.0]	
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(10)	(0)	(0)	(1)	(10)	(10)
Lymph Node	(1)	(3)	(5)	(1)	(1)	(0)
Deep Cervical, Ectasia	1 [3.0]	3 [2.0]	4 [1.5]		1 [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)



Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
Deep Cervical, Hyperplasia, Lymphoid Lymph Node, Mesenteric Atrophy	1 [3.0] (10)	3 [1.7] (0)	5 [2.4] (0)	1 [3.0] (3)	1 [3.0] (10)	(10)
Spleen Atrophy	(10)	(0)	(10)	(10)	(10)	(10)
Thymus Atrophy	(10)	(0)	(1)	(10)	10 [1.8] (10)	10 [3.8] (10)
Hemorrhage Necrosis			1 [2.0]		1 [3.0]	
					3 [1.3]	8 [2.6]
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(1)	(10)	(10)
Skin	(10)	(0)	(0)	(1)	(10)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(1)	(10)	(10)
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(1)	(10)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(1)	(10)	(10)
Alveolus, Necrosis, Acute Inflammation, Chronic						1 [4.0]
Metaplasia, Osseous	4 [1.0]				4 [1.0]	
Vein, Thrombosis	1 [1.0]				1 [1.0]	1 [1.0]
Nose	(10)	(0)	(10)	(10)	(10)	(10)
Inflammation, Chronic				9 [1.0]	4 [1.5]	
Inflammation, Suppurative				1 [1.0]	6 [1.7]	9 [1.8]
Olfactory Epi, Degeneration				2 [1.5]	7 [2.9]	10 [3.8]
Respirat Epith, Necrosis				1 [1.0]	2 [2.5]	10 [3.8]

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)

Experiment Number: 99023-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

Test Compound: beta-Myrcene

CAS Number: 123-35-3

Date Report Requested: 10/19/2014

Time Report Requested: 12:46:52

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG	2.0 G/KG	4.0 G/KG
Trachea Inflammation, Chronic	(10)	(0)	(0)	(1)	(10) 1 [2.0]	(10)
<b>SPECIAL SENSES SYSTEM</b>						
Eye	(10)	(0)	(0)	(1)	(10)	(10)
Cataract					1 [3.0]	
Postr Chamber, Exudate					1 [4.0]	
Retina, Atrophy					1 [2.0]	
Harderian Gland	(10)	(10)	(10)	(10)	(10)	(10)
Pigmentation, Porphyrin	3 [1.0]	4 [1.0]	2 [1.0]	4 [1.0]	5 [1.6]	10 [4.0]
Lacrimal Gland	(0)	(0)	(0)	(0)	(0)	(1)
Epithelium, Degeneration						1 [1.0]
<b>URINARY SYSTEM</b>						
Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Atrophy						1 [4.0]
Nephropathy	1 [1.0]	2 [1.0]	3 [1.0]	4 [1.0]	1 [1.0]	
Nephrosis				10 [1.0]	7 [1.1]	
Renal Tubule, Degeneration		10 [1.0]	10 [1.0]			
Renal Tubule, Mineralization		2 [1.0]	1 [1.0]	1 [1.0]	1 [1.0]	1 [1.0]
Renal Tubule, Necrosis					2 [3.5]	2 [4.0]
Urinary Bladder	(10)	(0)	(0)	(1)	(10)	(10)

**\*\* END OF REPORT \*\***

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)