

**Experiment Number:** 99028-03

**Test Type:** 90-DAY

**Route:** SKIN APPLICATION

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

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

**Date Report Requested:** 10/17/2014

**Time Report Requested:** 22:35:19

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

**Lab:** BAT

**C Number:** C99028  
**Lock Date:** 09/03/2002  
**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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P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]  
 Test Compound: bis(2-Chloroethoxy)methane  
 CAS Number: 111-91-1  
 Date Report Requested: 10/17/2014  
 Time Report Requested: 22:35:19  
 First Dose M/F: NA / NA  
 Lab: BAT

F 344/N Rat MALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						10
Natural Death						10
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)	(7)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)	(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)	(10)	(8)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)	(7)
Liver	(10)	(2)	(1)	(2)	(10)	(10)
Hepatodiaphragmatic Nodule	2	2	1	2	1	
Inflammation, Chronic	2 [1.0]				2 [1.0]	
Pancreas	(10)	(0)	(0)	(0)	(10)	(10)
Acinus, Atrophy	1 [1.0]					
Salivary Glands	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)	(10)
Inflammation, Chronic					1 [2.0]	
Stomach, Glandular	(10)	(10)	(10)	(10)	(10)	(10)
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(10)	(0)	(0)	(0)	(10)	(10)
Heart	(10)	(10)	(10)	(10)	(10)	(10)
Atrium, Thrombosis					3 [3.7]	

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: BAT

F 344/N Rat MALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
Cardiomyopathy	10 [1.0]	8 [1.3]	10 [1.0]	10 [1.0]	2 [1.0]	1 [1.0]
Fibrosis						1 [1.0]
Infiltration Cellular, Mononuclear CI					7 [1.0]	10 [1.4]
Mineralization	1 [1.0]					
Myocardium, Necrosis						7 [1.7]
Myocardium, Vacuolization Cytoplasmic					6 [1.3]	10 [1.5]
ENDOCRINE SYSTEM						
Adrenal Cortex	(10)	(0)	(0)	(0)	(10)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(10)	(10)
Parathyroid Gland	(9)	(0)	(0)	(0)	(10)	(10)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)
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)
Inflammation, Suppurative						1 [1.0]
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	(1)	(0)	(0)	(0)	(0)	(0)
Mediastinal, Congestion	1 [1.0]					
Lymph Node, Mesenteric	(10)	(10)	(10)	(10)	(10)	(10)

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**Lab:** BAT

F 344/N Rat MALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
Atrophy						3 [1.7]
Congestion						1 [2.0]
Necrosis, Lymphoid						9 [1.7]
Spleen	(10)	(10)	(10)	(10)	(10)	(10)
Atrophy						10 [2.8]
Hematopoietic Cell Proliferation			2 [1.5]			
Necrosis, Lymphoid						3 [1.0]
Thymus	(10)	(10)	(10)	(10)	(10)	(10)
Atrophy						3 [3.7]
Hemorrhage						1 [3.0]
Necrosis						10 [1.7]
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(8)	(0)	(0)	(0)	(9)	(10)
Skin	(10)	(0)	(0)	(0)	(10)	(10)
SOA Epidermis, Hyperplasia	4 [1.0]				4 [1.0]	
SOA Epidermis, Inflammation, Suppurative						2 [1.0]
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(0)	(10)	(10)
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(10)	(10)
Mineralization, Focal	1 [2.0]					
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(0)	(10)	(10)
Alveolar Epith, Hyperplasia, Focal	1 [1.0]					
Inflammation, Chronic	2 [1.0]				2 [1.0]	1 [1.0]
Nose	(10)	(10)	(10)	(10)	(10)	(9)
Olfactory Epi, Degeneration						7 [1.9]

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Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: Rat/F 344/N

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 10/17/2014

AVERAGE SEVERITY GRADES[b]

Time Report Requested: 22:35:19

Test Compound: bis(2-Chloroethoxy)methane

CAS Number: 111-91-1

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
Trachea	(10)	(0)	(0)	(0)	(10)	(10)
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(0)	(10)	(10)
Harderian Gland	(10)	(10)	(10)	(10)	(10)	(10)
Hemorrhage	1 [2.0]					
Hyperplasia, Lymphoid	1 [2.0]					
Inflammation, Chronic	1 [2.0]		1 [2.0]		1 [1.0]	
Pigmentation, Porphyrin	2 [1.5]	4 [1.5]	5 [1.4]	1 [1.0]	5 [1.0]	8 [2.4]
URINARY SYSTEM						
Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Nephropathy	7 [1.0]	8 [1.0]	8 [1.0]	9 [1.0]	7 [1.0]	2 [1.0]
Papilla, Renal Tubule, Mineralization						2 [1.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(10)	(10)

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

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

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F 344/N Rat FEMALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Moribund Sacrifice					1	4
Natural Death					1	6
Survivors						
Terminal Sacrifice	10	10	10	10	8	
Animals Examined Microscopically	10	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(9)	(8)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(9)	(8)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(9)	(7)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(9)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(9)	(9)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(9)	(7)
Liver	(10)	(3)	(0)	(0)	(10)	(10)
Hepatocyte, Periportal, Vacuolization Cytoplasmic					1 [3.0]	
Hepatodiaphragmatic Nodule	1	3			1	1
Inflammation, Chronic	8 [1.0]	1 [1.0]			5 [1.0]	
Pancreas	(10)	(0)	(0)	(0)	(10)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Glandular	(10)	(10)	(10)	(10)	(10)	(10)
Epithelium, Mineralization					1 [1.0]	
Erosion, Focal						1 [1.0]
<b>CARDIOVASCULAR SYSTEM</b>						

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
Blood Vessel	(10)	(0)	(0)	(0)	(10)	(10)
Heart	(10)	(10)	(10)	(10)	(10)	(10)
Cardiomyopathy	8 [1.0]	6 [1.0]	8 [1.0]	4 [1.0]	3 [1.0]	
Infiltration Cellular, Mononuclear CI				7 [1.0]	6 [1.2]	10 [1.9]
Mineralization				1 [1.0]		
Myocardium, Necrosis				1 [1.0]	1 [1.0]	5 [1.4]
Myocardium, Vacuolization Cytoplasmic				2 [1.0]	5 [1.4]	9 [1.8]
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(0)	(10)	(10)
Hyperplasia, Focal					1 [3.0]	
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(10)	(10)
Parathyroid Gland	(10)	(0)	(0)	(0)	(10)	(8)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)	(10)
Rathkes Cleft, Cyst					1	
Thyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)
<b>GENERAL BODY SYSTEM</b>						
None						
<b>GENITAL SYSTEM</b>						
Clitoral Gland	(10)	(0)	(0)	(0)	(10)	(10)
Inflammation, Chronic	1 [1.0]					
Ovary	(10)	(1)	(0)	(0)	(10)	(10)
Cyst	2 [1.0]	1 [1.0]				1 [2.0]
Uterus	(10)	(10)	(10)	(10)	(10)	(10)
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(10)	(0)	(0)	(0)	(10)	(10)
Lymph Node, Mesenteric	(10)	(10)	(10)	(9)	(10)	(10)

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

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
Atrophy						1 [2.0]
Necrosis, Lymphoid					2 [1.5]	8 [1.9]
Spleen	(10)	(10)	(10)	(10)	(10)	(10)
Atrophy					1 [1.0]	9 [1.9]
Necrosis, Lymphoid					1 [2.0]	8 [1.6]
Thymus	(10)	(10)	(10)	(10)	(10)	(10)
Atrophy						3 [2.7]
Necrosis					2 [2.5]	8 [2.4]
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(0)	(10)	(10)
Skin	(10)	(0)	(0)	(0)	(10)	(10)
SOA Dermis, Fibrosis						1 [2.0]
SOA Epidermis, Hyperplasia	4 [1.0]				2 [1.0]	
SOA Epidermis, Inflammation, Suppurative					2 [1.0]	
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(0)	(10)	(10)
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(10)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(0)	(10)	(10)
Inflammation, Acute						1 [3.0]
Inflammation, Chronic	2 [1.0]					1 [1.0]
Metaplasia, Osseous	1 [1.0]					
Nose	(10)	(10)	(10)	(10)	(10)	(9)
Olfactory Epi, Degeneration		1 [1.0]			3 [1.3]	4 [1.8]
Olfactory Epi, Inflammation, Acute		1 [1.0]				
Trachea	(10)	(0)	(0)	(0)	(10)	(10)

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0 MG/KG	50 MG/KG	100 MG/KG	200 MG/KG	400 MG/KG	600 MG/KG
Infiltration Cellular, Polymorphnuclear						1 [2.0]
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(0)	(10)	(10)
Harderian Gland	(10)	(10)	(10)	(10)	(10)	(10)
Inflammation, Chronic		1 [1.0]				
Pigmentation, Porphyrin		4 [1.3]	2 [1.5]		2 [1.5]	4 [1.5]
URINARY SYSTEM						
Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Cortex, Inflammation, Chronic				1 [1.0]		
Cortex, Renal Tubule, Necrosis						1 [2.0]
Nephropathy	1 [1.0]	1 [1.0]	1 [1.0]	1 [1.0]		
Papilla, Degeneration, Mucoid				1 [2.0]		
Papilla, Mineralization	1 [1.0]					
Papilla, Renal Tubule, Mineralization	4 [1.0]	6 [1.0]	6 [1.0]	4 [1.0]	4 [1.0]	5 [1.0]
Renal Tubule, Regeneration						3 [1.3]
Urinary Bladder	(10)	(0)	(0)	(0)	(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)