

**TDMs No.** 99028 - 05

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

**Date Report Reqsted:** 11/12/2007

**Test Type:** CHRONIC

bis(2-Chloroethoxy)methane

**Time Report Reqsted:** 14:57:37

**Route:** SKIN APPLICATION

**CAS Number:** 111-91-1

**First Dose M/F:** 09/16/02 / 09/17/02

**Species/Strain:** RATS/F 344

**Lab:** BAT

F1\_R2

**C Number:** C99028

**Lock Date:** 07/12/2005

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

**Treatment Groups:** Include ALL

**TDMSE Version:** 1.9.1

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bis(2-Chloroethoxy)methane

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First Dose M/F: 09/16/02 / 09/17/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	21	17	31	20
Natural Death	8	4	5	6
Survivors				
Moribund Sacrifice		1		
Terminal Sacrifice	21	28	14	24
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Esophagus	(50)	(50)	(50)	(50)
Inflammation		1 [4.0]		
Ulcer		1 [4.0]		
Intestine Large, Cecum	(49)	(50)	(50)	(50)
Edema	1 [3.0]			
Inflammation	1 [3.0]			
Parasite Metazoan		1 [1.0]		
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan		2 [1.5]		
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	11 [1.5]	5 [1.4]	7 [2.0]	7 [1.4]
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Inflammation				1 [3.0]
Ulcer		1 [2.0]		1 [3.0]
Epithelium, Hyperplasia		1 [2.0]		
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Inflammation		1 [2.0]		
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [2.0]	7 [1.0]	3 [1.0]	6 [1.2]
Basophilic Focus	19	19	16	19
Clear Cell Focus	22	24	14	22
Degeneration, Cystic	6 [1.5]	5 [1.4]	10 [1.4]	15 [1.5]
Eosinophilic Focus	10	15	8	11
Fatty Change	19 [1.5]	20 [1.6]	16 [1.6]	20 [1.3]

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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Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Fibrosis	39 [1.2]	25 [1.3]	23 [1.2]	31 [1.2]
Hematopoietic Cell Proliferation	2 [2.0]			
Hepatodiaphragmatic Nodule	4	5	6	9
Inflammation	32 [1.0]	38 [1.0]	33 [1.0]	41 [1.0]
Mixed Cell Focus	4	10	8	3
Necrosis	4 [2.5]	2 [1.5]	5 [1.8]	3 [2.0]
Thrombosis			2 [2.5]	
Bile Duct, Cyst		1 [1.0]		1 [1.0]
Bile Duct, Hyperplasia	46 [1.9]	46 [1.9]	44 [1.8]	47 [1.8]
Centrilobular, Necrosis	1 [1.0]	4 [2.0]	8 [1.8]	4 [2.5]
Mesentery	(10)	(10)	(9)	(9)
Accessory Spleen	1 [1.0]			
Fat, Necrosis	8 [2.9]	9 [2.2]	8 [2.9]	8 [2.4]
Oral Mucosa	(2)	(0)	(0)	(0)
Inflammation, Granulomatous	1 [3.0]			
Gingival, Cyst	2 [3.0]			
Pancreas	(50)	(50)	(50)	(50)
Acinus, Atrophy	17 [1.8]	21 [1.6]	17 [1.6]	17 [1.5]
Acinus, Hyperplasia	2 [2.0]	1 [2.0]	1 [1.0]	3 [1.7]
Duct, Cyst	11 [1.6]	5 [1.8]	4 [1.8]	5 [1.4]
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Inflammation		2 [3.5]	6 [3.3]	10 [2.6]
Ulcer		2 [3.5]	2 [4.0]	7 [3.0]
Epithelium, Hyperplasia	2 [1.5]	1 [3.0]	1 [2.0]	1 [2.0]
Stomach, Glandular	(50)	(50)	(50)	(50)
Ectopic Tissue	1			
Inflammation	1 [3.0]	2 [2.0]	1 [3.0]	
Mineralization		1 [1.0]		
Ulcer	1 [3.0]	1 [3.0]	1 [3.0]	

## CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	46 [1.7]	48 [1.4]	45 [1.2]	49 [1.8]
Fibrosis	50 [1.9]	50 [2.3]	49 [2.6]	49 [2.5]
Inflammation, Chronic Active	1 [2.0]			
Thrombosis	3 [2.3]	1 [2.0]	4 [3.0]	3 [3.3]
Coronary Artery, Inflammation		1 [2.0]		

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

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First Dose M/F: 09/16/02 / 09/17/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Endothelium, Hyperplasia	1 [2.0]			
Myocardium, Infiltration Cellular, Mononuclear Cell	50 [1.9]	50 [2.3]	49 [2.6]	50 [2.5]
Myocardium, Necrosis	50 [1.0]	50 [1.0]	49 [1.0]	50 [1.0]
Myocardium, Vacuolization Cytoplasmic	50 [1.9]	50 [2.3]	49 [2.6]	50 [2.5]
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy	1 [3.0]			
Hyperplasia	16 [1.5]	22 [1.4]	13 [1.2]	16 [1.7]
Vacuolization Cytoplasmic	33 [1.3]	38 [1.3]	35 [1.3]	39 [1.6]
Adrenal Medulla	(50)	(50)	(50)	(50)
Angiectasis		1 [2.0]		2 [3.0]
Hemorrhage	1 [3.0]			
Hyperplasia	9 [1.8]	7 [1.3]	8 [1.9]	10 [2.1]
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	4 [1.3]	9 [1.6]	11 [1.4]	5 [1.6]
Parathyroid Gland	(49)	(44)	(45)	(47)
Hyperplasia		1 [3.0]		
Hyperplasia, Focal				1 [2.0]
Pituitary Gland	(49)	(50)	(50)	(50)
Angiectasis	37 [2.9]	30 [2.8]	26 [2.7]	32 [2.6]
Atrophy	1 [3.0]			
Cyst	6 [1.2]	6 [1.3]	10 [2.0]	8 [1.5]
Pars Distalis, Hyperplasia	13 [2.1]	16 [2.1]	12 [2.1]	17 [2.2]
Thyroid Gland	(50)	(50)	(50)	(50)
Cyst	1 [1.0]	1 [1.0]	1 [2.0]	1 [2.0]
Inflammation		1 [2.0]		
C-cell, Hyperplasia	21 [1.5]	22 [1.3]	23 [1.5]	14 [1.5]
Follicle, Cyst		1		
Follicle, Hyperplasia	1 [2.0]	4 [1.8]	1 [2.0]	2 [1.5]

**GENERAL BODY SYSTEM**

None

**GENITAL SYSTEM**

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm	1 [2.0]			
Inflammation	1 [2.0]			1 [1.0]
Penis	(0)	(0)	(1)	(0)
Inflammation			1 [2.0]	
Preputial Gland	(50)	(50)	(50)	(50)
Cyst		3 [2.0]	2 [3.0]	
Hyperplasia			1 [2.0]	2 [2.5]
Inflammation	50 [1.8]	50 [1.8]	47 [1.9]	49 [1.8]
Duct, Ectasia			1 [4.0]	
Prostate	(50)	(50)	(50)	(50)
Hyperplasia	39 [1.2]	41 [1.1]	39 [1.2]	40 [1.2]
Inflammation	44 [1.8]	37 [1.7]	32 [1.8]	42 [1.8]
Inflammation, Suppurative	1 [2.0]			
Seminal Vesicle	(50)	(50)	(50)	(50)
Inflammation	2 [2.0]			2 [3.0]
Testes	(50)	(50)	(50)	(50)
Inflammation, Granulomatous		1 [1.0]		
Necrosis			1 [2.0]	
Germinal Epithelium, Atrophy	2 [4.0]	1 [4.0]	1 [2.0]	
Germinal Epithelium, Mineralization	1 [1.0]	1 [2.0]		2 [2.0]
Tunic, Fibrosis		1 [1.0]		
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Atrophy			4 [3.3]	
Hyperplasia	3 [3.3]	1 [2.0]	4 [3.3]	2 [3.5]
Lymph Node	(4)	(0)	(6)	(5)
Deep Cervical, Ectasia			1 [2.0]	
Deep Cervical, Hyperplasia, Lymphoid			1 [2.0]	1 [2.0]
Mediastinal, Hyperplasia, Lymphoid				1 [2.0]
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Ectasia	1 [3.0]			
Hyperplasia, Lymphoid				1 [1.0]
Inflammation, Chronic Active	1 [1.0]			
Spleen	(50)	(50)	(49)	(50)
Atrophy			3 [1.7]	4 [2.3]
Fibrosis			2 [1.5]	1 [3.0]

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Hematopoietic Cell Proliferation	24 [1.4]	25 [1.4]	15 [1.9]	24 [1.5]
Infarct			1 [2.0]	
Stromal Hyperplasia			1 [4.0]	
Thymus	(49)	(50)	(50)	(48)
Atrophy	45 [3.5]	50 [3.7]	46 [3.7]	47 [3.8]
Ectopic Parathyroid Gland	1 [1.0]			
Ectopic Thyroid				1 [1.0]
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(49)	(50)	(50)	(50)
Hyperplasia	13 [1.2]	10 [1.2]	7 [1.1]	12 [1.3]
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 [2.0]	3 [3.0]		
Edema	1 [2.0]			
Hemorrhage		1 [3.0]		
Artery, Site Of Application - Dermis, Inflammation		1 [2.0]		
Control Dermis, Fibrosis			1 [2.0]	
Dermis, Inflammation		1 [2.0]		
Hair Follicle, Site Of Application - Epidermis, Atrophy	1 [4.0]			
Sebaceous Gland, Hyperplasia			1 [2.0]	
Site Of Application - Dermis, Fibrosis		1 [1.0]		
Site Of Application - Dermis, Inflammation	2 [1.0]	2 [1.0]	2 [1.0]	
Site Of Application - Epidermis, Hyperkeratosis		1 [2.0]	1 [1.0]	
Site Of Application - Epidermis, Ulcer	1 [1.0]			
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Osteopetrosis			1 [2.0]	
Joint, Inflammation	2 [1.0]			1 [1.0]
Skeletal Muscle	(1)	(0)	(1)	(0)
<b>NERVOUS SYSTEM</b>				

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FISCHER 344 RATS MALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Brain	(50)	(50)	(50)	(50)
Hemorrhage	1 [3.0]			
Hydrocephalus	17 [2.9]	14 [2.9]	14 [3.0]	14 [3.0]
Hippocampus, Necrosis			1 [2.0]	
Hypothalamus, Compression	17 [3.4]	8 [3.4]	12 [3.5]	14 [3.3]
Thalamus, Necrosis			1 [2.0]	
Spinal Cord	(1)	(1)	(0)	(0)
<b>RESPIRATORY SYSTEM</b>				
Lung	(50)	(50)	(50)	(50)
Congestion		1 [2.0]		
Inflammation	17 [1.2]	22 [1.2]	20 [1.3]	16 [1.0]
Metaplasia, Osseous	1 [1.0]			
Alveolar Epithelium, Hyperplasia	7 [2.0]	12 [1.5]	9 [1.9]	8 [1.6]
Artery, Hyperplasia		1 [2.0]		
Nose	(50)	(49)	(50)	(49)
Foreign Body	7	12	4	5
Inflammation	27 [1.5]	32 [1.8]	22 [1.6]	18 [1.7]
Polyp, Inflammatory	1 [1.0]			
Glands, Cyst		1 [2.0]	2 [2.0]	1 [1.0]
Olfactory Epithelium, Accumulation, Hyaline Droplet	1 [2.0]	2 [3.0]		
Olfactory Epithelium, Degeneration	5 [1.2]	17 [1.3]	30 [1.3]	48 [1.9]
Olfactory Epithelium, Metaplasia, Respiratory	9 [2.1]	9 [2.0]	3 [1.3]	4 [2.0]
Olfactory Epithelium, Metaplasia, Squamous	1 [1.0]			
Trachea	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]		3 [1.7]	
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Cataract	2 [3.0]	1 [3.0]		2 [3.5]
Retina, Atrophy	2 [3.0]	1 [3.0]		2 [3.5]
Sclera, Metaplasia, Osseous	38 [1.6]	35 [1.6]	28 [1.5]	32 [1.5]
Harderian Gland	(50)	(50)	(50)	(50)
Atrophy			1 [1.0]	2 [1.0]

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**Route: SKIN APPLICATION**

**First Dose M/F: 09/16/02 / 09/17/02**

**Species/Strain: RATS/F 344**

**Lab: BAT**

<b>FISCHER 344 RATS MALE</b>	<b>0 MG/KG</b>	<b>75 MG/KG</b>	<b>150 MG/KG</b>	<b>300 MG/KG</b>
Hyperplasia		1 [1.0]		1 [1.0]
Inflammation	3 [1.3]	3 [1.0]	2 [1.5]	1 [1.0]
Pigmentation, Porphyrin	1 [2.0]			
Zymbal's Gland	(1)	(0)	(0)	(1)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Fibrosis				1 [3.0]
Infarct		1 [2.0]		
Inflammation				1 [3.0]
Nephropathy	47 [1.8]	48 [1.9]	43 [1.7]	48 [2.1]
Renal Tubule, Cyst		1 [2.0]		
Renal Tubule, Hyperplasia				1 [1.0]
Renal Tubule, Pigmentation, Lipofuscin	1 [3.0]			
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation				2 [3.5]
Muscularis, Mineralization		1 [1.0]		
Transitional Epithelium, Hyperplasia	1 [2.0]		1 [2.0]	1 [2.0]

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



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Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	19	18	15	19
Natural Death	12	2	7	13
Survivors				
Terminal Sacrifice	19	30	28	18
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan	3 [1.0]	3 [1.0]	2 [2.5]	1 [1.0]
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan		4 [3.0]	6 [1.7]	5 [1.8]
Ulcer	1 [2.0]			
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Ulcer	1 [4.0]			
Liver	(50)	(50)	(50)	(50)
Angiectasis	4 [1.0]	5 [1.2]	1 [1.0]	2 [1.0]
Basophilic Focus	41	48	42	30
Clear Cell Focus	9	9	10	5
Degeneration, Cystic		2 [1.0]		
Eosinophilic Focus	5	8	6	6
Fatty Change	9 [1.7]	9 [1.4]	4 [1.5]	9 [1.6]
Fibrosis	5 [1.0]	3 [1.0]	10 [1.0]	2 [1.5]
Hepatodiaphragmatic Nodule	7	6	8	8
Inflammation	40 [1.0]	45 [1.0]	39 [1.1]	33 [1.0]
Mixed Cell Focus	4	10	10	3
Necrosis	2 [1.0]	1 [1.0]	2 [1.5]	1 [1.0]
Bile Duct, Cyst		1 [2.0]	1 [1.0]	
Bile Duct, Hyperplasia	17 [1.3]	18 [1.3]	19 [1.6]	12 [1.6]
Centrilobular, Necrosis	4 [2.5]	3 [3.0]	5 [2.0]	5 [1.8]
Periportal, Cytoplasmic Alteration	1 [2.0]			
Mesentery	(13)	(13)	(17)	(6)

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Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Necrosis	1 [3.0]			
Fat, Necrosis	13 [2.5]	12 [2.6]	17 [2.5]	6 [3.0]
Oral Mucosa	(1)	(0)	(0)	(0)
Pancreas	(50)	(50)	(50)	(50)
Hyperplasia		1 [2.0]		
Inflammation	2 [2.5]			1 [1.0]
Acinus, Atrophy	13 [1.4]	12 [1.2]	9 [1.3]	6 [1.3]
Acinus, Hyperplasia	1 [2.0]			
Duct, Cyst	4 [1.8]	6 [1.5]	1 [2.0]	2 [1.0]
Stomach, Forestomach	(50)	(50)	(50)	(50)
Inflammation	6 [3.2]	3 [3.0]	1 [2.0]	2 [3.0]
Ulcer	4 [3.3]	3 [3.0]		1 [2.0]
Epithelium, Hyperplasia	1 [4.0]	2 [2.0]		
Stomach, Glandular	(50)	(50)	(50)	(50)
Fibrosis				1 [2.0]
Inflammation	2 [2.0]			1 [3.0]
Mineralization				2 [1.5]
Ulcer	1 [1.0]	1 [1.0]		2 [2.5]
Tongue	(0)	(0)	(0)	(1)
<b>CARDIOVASCULAR SYSTEM</b>				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	40 [1.2]	45 [1.1]	42 [1.1]	46 [1.6]
Fibrosis	50 [1.5]	50 [2.0]	50 [2.0]	50 [2.3]
Thrombosis	1 [3.0]	1 [3.0]		
Coronary Artery, Inflammation	1 [2.0]			
Myocardium, Infiltration Cellular, Mononuclear Cell	50 [1.5]	50 [2.0]	50 [2.0]	50 [2.3]
Myocardium, Necrosis	50 [1.0]	50 [1.0]	50 [1.0]	50 [1.0]
Myocardium, Vacuolization Cytoplasmic	50 [1.5]	50 [2.0]	50 [2.0]	50 [2.3]
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Angiectasis	1 [3.0]			1 [2.0]
Hemorrhage				2 [2.5]
Hyperplasia	11 [1.7]	26 [1.5]	18 [1.7]	14 [1.6]
Necrosis				7 [2.6]

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

FISCHER 344 RATS FEMALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Vacuolization Cytoplasmic	15 [1.7]	17 [1.5]	21 [1.7]	15 [1.3]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	1 [2.0]	3 [1.3]	3 [1.7]	4 [1.8]
Necrosis	(50)	(50)	1 [3.0]	(50)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	10 [1.0]	6 [1.0]	5 [1.0]	6 [1.0]
Parathyroid Gland	(43)	(46)	(48)	(50)
Pituitary Gland	(50)	(50)	(50)	(50)
Angiectasis	32 [2.6]	39 [2.5]	32 [2.3]	26 [2.4]
Atrophy	1 [2.0]			
Cyst	16 [1.4]	21 [1.6]	17 [1.5]	18 [1.4]
Hemorrhage				1 [1.0]
Pars Distalis, Hyperplasia	16 [2.1]	26 [1.8]	19 [2.1]	18 [2.3]
Pars Intermedia, Hyperplasia	1 [2.0]			
Thyroid Gland	(50)	(50)	(50)	(50)
Atrophy			1 [3.0]	
Cyst			1 [1.0]	
C-cell, Hyperplasia	33 [1.5]	38 [1.4]	34 [1.3]	19 [1.2]
Follicle, Hyperplasia		2 [2.0]	3 [1.7]	

## GENERAL BODY SYSTEM

None

## GENITAL SYSTEM

Clitoral Gland	(50)	(50)	(50)	(50)
Cyst	1 [2.0]	2 [2.5]	2 [2.0]	
Hyperplasia	2 [3.0]	6 [2.0]	6 [1.8]	3 [1.0]
Inflammation	32 [1.4]	32 [1.3]	40 [1.4]	23 [1.4]
Ovary	(50)	(50)	(50)	(50)
Atrophy		2 [4.0]	2 [4.0]	
Cyst	5 [2.4]	4 [1.8]	7 [1.7]	5 [2.0]
Bilateral, Cyst			1 [2.0]	
Uterus	(50)	(50)	(50)	(50)
Atrophy	1 [2.0]			
Inflammation, Suppurative	1 [1.0]			
Cervix, Endometrium, Hyperplasia		1 [3.0]		
Cervix, Myometrium, Hyperplasia	1 [3.0]			

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)

Test Type: CHRONIC

bis(2-Chloroethoxy)methane

Time Report Requested: 14:57:37

Route: SKIN APPLICATION

CAS Number: 111-91-1

First Dose M/F: 09/16/02 / 09/17/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Endometrium, Hyperplasia, Cystic Vagina	6 [1.7] (0)	4 [1.8] (0)	4 [1.0] (0)	5 [2.0] (1)
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(49)
Atrophy	2 [2.0]			
Hyperplasia	3 [2.7]	1 [2.0]	2 [3.0]	3 [2.7]
Lymph Node	(3)	(1)	(5)	(1)
Deep Cervical, Hyperplasia, Lymphoid			1 [2.0]	
Mediastinal, Ectasia		1 [3.0]		
Mediastinal, Hyperplasia, Lymphoid	1 [1.0]			
Pancreatic, Ectasia	1 [3.0]			
Pancreatic, Hyperplasia, Lymphoid	1 [3.0]			
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Hyperplasia, Lymphoid	1 [1.0]			
Spleen	(50)	(50)	(50)	(50)
Atrophy	3 [1.7]			2 [2.5]
Fibrosis				1 [1.0]
Hematopoietic Cell Proliferation	29 [1.7]	37 [1.4]	34 [1.6]	26 [1.8]
Infarct				1 [3.0]
Thymus	(49)	(50)	(50)	(49)
Atrophy	43 [3.2]	50 [3.5]	47 [3.4]	35 [3.3]
Hemorrhage				1 [3.0]
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(50)	(50)	(50)	(50)
Hyperplasia	5 [1.4]		3 [2.0]	2 [3.5]
Inflammation	1 [1.0]			
Skin	(50)	(50)	(50)	(49)
Cyst Epithelial Inclusion			1	
Control Dermis, Inflammation	1 [2.0]			
Control Epidermis, Hyperplasia	1 [2.0]			
Dermis, Inflammation		1 [2.0]	1 [2.0]	
Epidermis, Hyperplasia		1 [2.0]		
Epidermis, Ulcer		1 [2.0]	1 [2.0]	
Sebaceous Gland, Hyperplasia			1 [1.0]	
Site Of Application - Dermis, Fibrosis	3 [1.0]		1 [2.0]	1 [1.0]

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Test Type: CHRONIC

bis(2-Chloroethoxy)methane

Time Report Requested: 14:57:37

Route: SKIN APPLICATION

CAS Number: 111-91-1

First Dose M/F: 09/16/02 / 09/17/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Site Of Application - Dermis, Inflammation		2 [1.5]	3 [2.0]	2 [1.5]
Site Of Application - Epidermis, Hyperkeratosis			1 [1.0]	
Site Of Application - Epidermis, Hyperplasia	1 [2.0]	2 [2.5]	5 [1.8]	1 [2.0]
Site Of Application - Epidermis, Ulcer Subcutaneous Tissue, Necrosis	1 [2.0]	1 [2.0]	3 [2.0] 1 [3.0]	1 [2.0]
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Joint, Inflammation	1 [1.0]			3 [1.3]
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Hemorrhage	1 [3.0]			
Hydrocephalus	11 [3.2]	14 [3.0]	8 [3.5]	5 [2.4]
Hippocampus, Necrosis		1 [2.0]		
Hypothalamus, Compression	13 [3.3]	12 [3.6]	8 [4.0]	5 [2.6]
Vein, Infiltration Cellular, Mononuclear Cell		1 [2.0]		
<b>RESPIRATORY SYSTEM</b>				
Lung	(50)	(50)	(50)	(50)
Congestion	1 [2.0]		2 [2.0]	1 [3.0]
Inflammation	18 [1.1]	31 [1.0]	24 [1.1]	19 [1.1]
Metaplasia, Osseous			1 [1.0]	
Thrombosis	1 [2.0]			
Alveolar Epithelium, Hyperplasia	1 [2.0]	7 [1.6]	7 [1.4]	6 [1.5]
Alveolar Epithelium, Metaplasia, Squamous			3 [1.3]	
Bronchus, Hyperplasia		1 [2.0]		
Nose	(49)	(49)	(50)	(49)
Foreign Body	1	2	2	
Inflammation	10 [1.5]	14 [1.1]	16 [1.3]	6 [1.3]

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

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Test Type: CHRONIC

bis(2-Chloroethoxy)methane

Time Report Requested: 14:57:37

Route: SKIN APPLICATION

CAS Number: 111-91-1

First Dose M/F: 09/16/02 / 09/17/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	75 MG/KG	150 MG/KG	300 MG/KG
Glands, Cyst				1 [2.0]
Olfactory Epithelium, Accumulation, Hyaline Droplet		1 [2.0]	1 [2.0]	
Olfactory Epithelium, Degeneration	5 [1.0]	4 [1.3]	18 [1.1]	49 [2.3]
Olfactory Epithelium, Metaplasia, Respiratory			1 [1.0]	1 [1.0]
Olfactory Epithelium, Metaplasia, Squamous				1 [1.0]
Respiratory Epithelium, Degeneration			1 [1.0]	
Trachea	(50)	(50)	(50)	(50)
Glands, Cyst		1 [2.0]		
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Cataract	1 [3.0]	2 [3.0]	3 [3.0]	5 [2.8]
Retina, Atrophy	2 [2.0]	3 [2.7]	4 [2.8]	5 [3.0]
Sclera, Metaplasia, Osseous	7 [1.6]	2 [2.0]	6 [1.3]	4 [1.3]
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia			1 [1.0]	
Inflammation	5 [1.0]	11 [1.0]	9 [1.0]	10 [1.2]
Capillary, Hyperplasia		1 [1.0]		
Lacrimal Gland	(0)	(1)	(0)	(0)
Hyperplasia		1 [2.0]		
Zymbal's Gland	(0)	(0)	(0)	(1)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Hydronephrosis	1 [3.0]	1 [3.0]	1 [3.0]	1 [2.0]
Inflammation, Suppurative		1 [3.0]		
Nephropathy	30 [1.3]	30 [1.2]	34 [1.1]	25 [1.2]
Renal Tubule, Cyst	1 [2.0]			
Urinary Bladder	(50)	(50)	(49)	(50)
Inflammation	1 [3.0]			
Transitional Epithelium, Hyperplasia			1 [2.0]	

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TDMS No. 99028 - 05

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

Date Report Reqsted: 11/12/2007

Test Type: CHRONIC

bis(2-Chloroethoxy)methane

Time Report Reqsted: 14:57:37

Route: SKIN APPLICATION

CAS Number: 111-91-1

First Dose M/F: 09/16/02 / 09/17/02

Species/Strain: RATS/F 344

Lab: BAT

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FISCHER 344 RATS FEMALE

0 MG/KG

75 MG/KG

150 MG/KG

300 MG/KG

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\*\*\* 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)