

Experiment Number: 60311 - 04

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

Date Report Requested: 08/16/2012

Test Type: 90-DAY

Cobalt

Time Report Requested: 09:00:49

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 03/07/05 / 03/07/05

Species/Strain: MICE/B6C3F1

Lab: BNW

F2_M3

NTP Study Number: C60311
Lock Date: 11/29/2005
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.6.0.0_007
PWG Approval Date: NONE

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Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE MALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
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Disposition Summary

Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10

ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Gallbladder	(9)	(0)	(0)	(0)	(0)	(9)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(0)	(0)	(0)	(0)	(10)
Pancreas	(10)	(0)	(0)	(0)	(0)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(0)	(10)
Hyperkeratosis						1 [2.0]
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)	(10)

CARDIOVASCULAR SYSTEM

Blood Vessel	(0)	(0)	(0)	(0)	(0)	(1)
Heart	(10)	(0)	(0)	(0)	(0)	(10)

ENDOCRINE SYSTEM

Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(9)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(0)	(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)

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B6C3F1 MICE MALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
Parathyroid Gland	(4)	(0)	(0)	(0)	(0)	(6)
Pituitary Gland	(10)	(0)	(0)	(0)	(0)	(9)
Thyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Coagulating Gland	(0)	(0)	(0)	(0)	(0)	(1)
Epididymis	(10)	(10)	(10)	(9)	(10)	(10)
Atrophy						10 [1.0]
Exfoliated Germ Cell						10 [2.7]
Hypospermia						10 [2.9]
Vacuolization Cytoplasmic						9 [1.0]
Preputial Gland	(10)	(0)	(0)	(0)	(0)	(10)
Prostate	(10)	(0)	(0)	(0)	(0)	(10)
Seminal Vesicle	(10)	(0)	(0)	(0)	(0)	(10)
Testes	(10)	(10)	(10)	(10)	(10)	(10)
Germinal Epithelium, Degeneration	2 [1.0]				1 [1.0]	10 [4.0]

HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Bronchial	(5)	(0)	(0)	(0)	(0)	(6)
Erythrophagocytosis						2 [1.0]
Lymph Node, Mandibular	(4)	(0)	(0)	(0)	(0)	(8)
Lymph Node, Mediastinal	(1)	(0)	(0)	(0)	(0)	(5)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Lymphocyte, Necrosis	1 [2.0]					
Spleen	(10)	(0)	(0)	(0)	(0)	(10)
Thymus	(10)	(0)	(0)	(0)	(0)	(10)

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B6C3F1 MICE MALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
INTEGUMENTARY SYSTEM						
Skin	(10)	(0)	(0)	(0)	(0)	(10)
MUSCULOSKELETAL SYSTEM						
Bone	(10)	(0)	(0)	(0)	(0)	(10)
NERVOUS SYSTEM						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
RESPIRATORY SYSTEM						
Larynx	(10)	(10)	(10)	(10)	(10)	(10)
Metaplasia, Squamous		10 [1.8]	10 [1.8]	10 [1.9]	10 [1.9]	10 [2.1]
Lung	(10)	(10)	(10)	(10)	(10)	(10)
Hemorrhage		1 [1.0]		1 [1.0]	7 [1.1]	6 [1.0]
Metaplasia, Osseous						1 [1.0]
Alveolar/bronchiolar, Epithelium, Karyomegaly					10 [1.0]	10 [3.0]
Alveolus, Infiltration Cellular, Histiocyte		10 [1.0]	10 [1.0]	10 [1.0]	10 [2.0]	10 [3.0]
Alveolus, Proteinosis					10 [1.0]	10 [2.0]
Bronchiole, Epithelium, Hyperplasia				10 [1.0]	10 [1.9]	10 [3.0]
Bronchiole, Epithelium, Vacuolization Cytoplasmic		10 [1.0]	10 [1.0]	10 [1.5]	10 [2.7]	10 [3.9]
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Inflammation, Chronic Active					8 [1.4]	10 [2.5]
Olfactory Epithelium, Degeneration		2 [1.0]	10 [1.0]	10 [1.0]	10 [2.0]	10 [3.0]
Olfactory Epithelium, Hyperplasia			1 [1.0]	5 [1.0]	2 [1.0]	3 [1.3]
Respiratory Epithelium, Degeneration			6 [1.0]	9 [1.0]	10 [1.9]	10 [2.0]
Respiratory Epithelium, Metaplasia, Squamous			2 [1.0]	5 [1.0]	10 [1.3]	10 [1.9]
Turbinate, Atrophy					8 [2.1]	10 [3.0]
Trachea	(10)	(0)	(0)	(0)	(0)	(10)
Erosion						1 [1.0]

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Lab: BNW

B6C3F1 MICE MALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(0)	(0)	(10)
Hemorrhage, Acute	1 [3.0]					
Harderian Gland	(10)	(0)	(0)	(0)	(0)	(10)
URINARY SYSTEM						
Kidney	(10)	(0)	(0)	(0)	(0)	(10)
Nephropathy	1 [1.0]					1 [1.0]
Renal Tubule, Cyst						1
Renal Tubule, Cyst, Multiple						1
Urinary Bladder	(10)	(0)	(0)	(0)	(0)	(10)

*** END OF MALE ***

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B6C3F1 MICE FEMALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
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Disposition Summary

Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Accidentally Killed				1		
Survivors						
Terminal Sacrifice	10	10	10	9	10	10
Animals Examined Microscopically	10	10	10	10	10	10

ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(1)	(0)	(10)
Gallbladder	(10)	(0)	(0)	(1)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(1)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(1)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(1)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(1)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(1)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(1)	(0)	(10)
Liver	(10)	(0)	(0)	(1)	(0)	(10)
Inflammation, Chronic Active	1 [1.0]					
Pancreas	(10)	(0)	(0)	(1)	(0)	(10)
Salivary Glands	(10)	(0)	(0)	(1)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(1)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(1)	(0)	(10)

CARDIOVASCULAR SYSTEM

Blood Vessel	(1)	(0)	(0)	(0)	(0)	(1)
Heart	(10)	(0)	(0)	(1)	(0)	(10)

ENDOCRINE SYSTEM

Adrenal Cortex	(10)	(0)	(0)	(1)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(1)	(0)	(10)

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B6C3F1 MICE FEMALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
Islets, Pancreatic	(10)	(0)	(0)	(1)	(0)	(10)
Parathyroid Gland	(8)	(0)	(0)	(1)	(0)	(6)
Pituitary Gland	(10)	(0)	(0)	(1)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(1)	(0)	(9)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(7)	(0)	(0)	(1)	(0)	(7)
Ovary	(10)	(0)	(0)	(1)	(0)	(10)
Uterus	(10)	(0)	(0)	(1)	(0)	(10)
Endometrium, Inflammation	1 [1.0]					1 [1.0]

HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(0)	(0)	(1)	(0)	(10)
Lymph Node, Bronchial	(6)	(0)	(0)	(1)	(0)	(7)
Lymph Node, Mandibular	(8)	(0)	(0)	(1)	(0)	(7)
Lymph Node, Mediastinal	(1)	(0)	(0)	(0)	(0)	(4)
Lymph Node, Mesenteric	(10)	(0)	(0)	(1)	(0)	(10)
Spleen	(10)	(0)	(0)	(1)	(0)	(10)
Thymus	(10)	(0)	(0)	(1)	(0)	(10)

INTEGUMENTARY SYSTEM

Mammary Gland	(10)	(0)	(0)	(1)	(0)	(10)
Skin	(10)	(0)	(0)	(1)	(0)	(10)

MUSCULOSKELETAL SYSTEM

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B6C3F1 MICE FEMALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
Bone	(10)	(0)	(0)	(1)	(0)	(10)
NERVOUS SYSTEM						
Brain	(10)	(0)	(0)	(1)	(0)	(10)
RESPIRATORY SYSTEM						
Larynx	(10)	(10)	(10)	(10)	(10)	(10)
Metaplasia, Squamous		10 [1.3]	10 [1.4]	10 [1.6]	10 [1.8]	10 [2.2]
Lung	(10)	(10)	(10)	(10)	(10)	(10)
Emphysema						3 [2.0]
Hemorrhage					8 [1.0]	2 [1.0]
Alveolar/bronchiolar, Epithelium, Karyomegaly					10 [1.7]	10 [3.0]
Alveolus, Infiltration Cellular, Histiocyte		10 [1.0]	10 [1.0]	10 [1.0]	10 [2.1]	10 [3.0]
Alveolus, Proteinosis					10 [1.0]	10 [1.8]
Arteriole, Thrombosis				1 [1.0]		
Bronchiole, Epithelium, Hyperplasia				10 [1.0]	10 [1.9]	10 [3.0]
Bronchiole, Epithelium, Vacuolization Cytoplasmic		10 [1.0]	10 [1.0]	10 [1.1]	10 [2.6]	10 [3.9]
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Inflammation, Chronic Active				1 [1.0]	10 [2.5]	10 [2.4]
Olfactory Epithelium, Degeneration		1 [1.0]	7 [1.0]	9 [1.0]	10 [2.5]	10 [2.9]
Olfactory Epithelium, Hyperplasia				3 [1.0]		
Respiratory Epithelium, Degeneration			1 [1.0]	8 [1.0]	10 [1.9]	10 [1.9]
Respiratory Epithelium, Metaplasia, Squamous				9 [1.0]	10 [2.0]	10 [2.0]
Turbinate, Atrophy					10 [2.2]	10 [2.9]
Pleura	(1)	(0)	(0)	(0)	(0)	(0)
Infiltration Cellular, Mixed Cell, Focal	1 [1.0]					
Trachea	(10)	(0)	(0)	(1)	(0)	(9)
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(1)	(0)	(10)

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B6C3F1 MICE FEMALE	control	0.625 mg/m3	1.25 mg/m3	2.5 mg/m3	5 mg/m3	10 mg/m3
Harderian Gland Hemorrhage	(10)	(0)	(0)	(1)	(0)	(10) 1 [1.0]
<hr/>						
URINARY SYSTEM						
Kidney Nephropathy	(10) 1 [1.0]	(0)	(0)	(1)	(0)	(10) 2 [1.0]
Urinary Bladder	(10)	(0)	(0)	(1)	(0)	(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)