

**TDMs No.** 60311 - 06

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

**Date Report Requested:** 09/08/2011

**Test Type:** CHRONIC

Cobalt

**Time Report Requested:** 08:23:42

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**CAS Number:** 7440-48-4

**First Dose M/F:** 05/15/06 / 05/15/06

**Species/Strain:** MICE/B6C3F1

**Lab:** BNW

F1\_M3

**C Number:** C60311  
**Lock Date:** 12/03/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.4.2.1\_003  
**PWG Approval Date:** NONE

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First Dose M/F: 05/15/06 / 05/15/06

Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE MALE control 1.25 mg/m3 2.5 mg/m3 5.0 mg/m3

**Disposition Summary**

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	5	13	12	17
Natural Death	6	6	9	8
Survivors				
Moribund Sacrifice			1	3
Terminal Sacrifice	39	31	28	22
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Arteriole, Inflammation, Acute			1 [3.0]	
Gallbladder	(43)	(37)	(34)	(35)
Degeneration, Hyaline			1 [3.0]	
Intestine Large, Cecum	(45)	(45)	(44)	(45)
Intestine Large, Colon	(47)	(45)	(45)	(46)
Intestine Large, Rectum	(44)	(44)	(45)	(48)
Intestine Small, Duodenum	(45)	(44)	(44)	(44)
Inflammation, Chronic Active	1 [4.0]			
Ulcer			1 [4.0]	
Intestine Small, Ileum	(45)	(45)	(43)	(44)
Inflammation, Acute		1 [4.0]		
Inflammation, Chronic Active			1 [3.0]	
Intestine Small, Jejunum	(45)	(45)	(43)	(44)
Liver	(50)	(50)	(50)	(50)
Angiectasis		1 [2.0]		1 [3.0]
Basophilic Focus	4	4	6	4
Clear Cell Focus	17	17	8	
Eosinophilic Focus	6	5	4	2
Fatty Change			1 [2.0]	
Hemorrhage			1 [3.0]	
Hepatodiaphragmatic Nodule		3		3
Inflammation, Chronic			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)

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Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Mixed Cell Focus	1			
Necrosis	2 [3.5]	3 [2.3]	1 [2.0]	1 [1.0]
Tension Lipidosis	2 [1.0]		2 [1.5]	
Mesentery	(5)	(5)	(5)	(3)
Fat, Necrosis	5 [2.0]	4 [2.0]	5 [2.0]	3 [2.0]
Pancreas	(50)	(47)	(50)	(50)
Atrophy			1 [2.0]	1 [1.0]
Salivary Glands	(50)	(49)	(50)	(50)
Inflammation, Chronic		1 [2.0]		
Stomach, Forestomach	(50)	(48)	(50)	(50)
Hyperplasia, Squamous	1 [1.0]	2 [1.5]	2 [2.0]	4 [2.8]
Inflammation, Chronic Active		1 [1.0]		3 [2.0]
Ulcer	1 [2.0]	5 [1.8]	3 [2.3]	1 [3.0]
Stomach, Glandular	(48)	(46)	(48)	(49)
Necrosis	1 [1.0]	1 [1.0]	1 [2.0]	
Ulcer		1 [3.0]		1 [3.0]
Arteriole, Inflammation, Acute			1 [3.0]	
Tooth	(8)	(2)	(2)	(1)
Dysplasia	8 [3.0]	1 [4.0]	2 [3.5]	1 [4.0]
Inflammation, Chronic Active		1 [3.0]		

CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	13 [1.1]	5 [1.2]	12 [1.0]	8 [1.3]
Hemorrhage				1 [3.0]
Inflammation, Suppurative		1 [1.0]		
Mineralization	1 [1.0]	1 [2.0]		
Necrosis			1 [3.0]	
Thrombosis	1 [2.0]			
Pericardium, Inflammation, Chronic				1 [2.0]

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(49)	(50)	(50)
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Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Hyperplasia	6 [2.2]	10 [2.1]	2 [2.0]	1 [2.0]
Hypertrophy	18 [2.0]	9 [2.0]	12 [2.0]	2 [2.0]
Necrosis	1 [1.0]			
Adrenal Medulla	(50)	(49)	(50)	(48)
Hyperplasia	2 [2.0]	2 [2.0]		
Islets, Pancreatic	(49)	(47)	(50)	(50)
Hyperplasia	2 [2.5]	3 [2.3]		2 [2.5]
Parathyroid Gland	(29)	(25)	(26)	(27)
Pituitary Gland	(47)	(49)	(48)	(48)
Pars Distalis, Hyperplasia	1 [3.0]	2 [3.0]	1 [2.0]	
Thyroid Gland	(49)	(49)	(50)	(49)

GENERAL BODY SYSTEM

Tissue NOS	(0)	(0)	(0)	(1)
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GENITAL SYSTEM

Coagulating Gland	(0)	(1)	(0)	(1)
Epididymis	(50)	(49)	(50)	(50)
Granuloma Sperm	2 [2.5]		1 [2.0]	
Penis	(0)	(0)	(0)	(1)
Inflammation, Acute				1 [2.0]
Preputial Gland	(49)	(50)	(49)	(50)
Ectasia	1 [4.0]	1 [3.0]		
Inflammation, Chronic Active	1 [3.0]	1 [3.0]		
Prostate	(50)	(49)	(48)	(50)
Inflammation, Acute		1 [3.0]		
Seminal Vesicle	(48)	(48)	(49)	(50)
Congestion		1 [3.0]		
Inflammation, Chronic Active		1 [2.0]		1 [3.0]
Testes	(50)	(49)	(50)	(50)
Germinal Epithelium, Degeneration	9 [1.6]	14 [1.6]	8 [1.6]	21 [1.5]
Interstitial Cell, Hyperplasia				1 [1.0]

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Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
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## HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(49)	(50)	(49)
Angiectasis				1 [2.0]
Thrombosis				1 [2.0]
Lymph Node	(2)	(0)	(1)	(1)
Renal, Hemorrhage	1 [4.0]			
Lymph Node, Bronchial	(26)	(32)	(20)	(24)
Lymph Node, Mandibular	(37)	(23)	(27)	(37)
Lymph Node, Mediastinal	(34)	(34)	(36)	(44)
Hyperplasia, Lymphoid				1 [2.0]
Lymph Node, Mesenteric	(47)	(44)	(44)	(42)
Hemorrhage	1 [4.0]	1 [4.0]		
Hyperplasia, Lymphoid			1 [1.0]	
Arteriole, Inflammation, Chronic Active				1 [4.0]
Spleen	(50)	(48)	(49)	(48)
Hematopoietic Cell Proliferation	5 [2.2]			
Infarct		1 [3.0]		
Thymus	(42)	(44)	(40)	(38)

## INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(49)
Inflammation, Chronic Active	1 [3.0]	1 [3.0]	2 [3.0]	2 [4.0]
Metaplasia, Osseous			1 [2.0]	
Subcutaneous Tissue, Edema	1 [3.0]			

## MUSCULOSKELETAL SYSTEM

Bone	(50)	(49)	(50)	(50)
Skeletal Muscle	(0)	(3)	(3)	(1)

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B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
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## NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Infiltration Cellular, Histiocyte		1 [3.0]		
Necrosis		1 [2.0]		
Peripheral Nerve	(1)	(0)	(0)	(1)
Degeneration	1 [3.0]			
Spinal Cord	(1)	(0)	(0)	(1)

## RESPIRATORY SYSTEM

Larynx	(48)	(47)	(49)	(50)
Inflammation, Suppurative	7 [1.0]	2 [1.0]	2 [1.0]	4 [1.0]
Inflammation, Chronic	1 [1.0]	1 [1.0]		
Arteriole, Inflammation, Acute			1 [3.0]	
Respiratory Epithelium, Erosion				1 [1.0]
Respiratory Epithelium, Metaplasia, Squamous	7 [1.0]	47 [1.0]	49 [1.0]	49 [1.0]
Respiratory Epithelium, Vacuolization Cytoplasmic		20 [1.0]	24 [1.0]	32 [1.1]
Squamous Epithelium, Erosion	1 [1.0]	3 [1.0]		1 [1.0]
Squamous Epithelium, Hyperplasia	2 [1.0]	5 [1.0]	5 [1.0]	8 [1.0]
Lung	(50)	(49)	(50)	(50)
Inflammation, Suppurative	1 [1.0]	2 [2.0]	6 [1.5]	16 [2.3]
Proteinosis	2 [1.0]	46 [1.7]	49 [3.1]	50 [3.9]
Alveolar/bronchiolar Epithelium, Hyperplasia		46 [1.0]	49 [1.6]	50 [2.3]
Alveolar/bronchiolar Epithelium, Vacuolization Cytoplasmic		49 [1.1]	47 [1.9]	48 [3.1]
Alveolar Epithelium, Hyperplasia	4 [2.3]	29 [1.7]	24 [1.8]	43 [2.0]
Alveolus, Infiltration Cellular, Histiocyte	10 [1.8]	49 [1.8]	48 [2.5]	48 [3.1]
Bronchiole, Epithelium, Erosion		4 [1.0]	10 [1.3]	2 [1.0]
Bronchiole, Epithelium, Hyperplasia	4 [2.5]	7 [1.3]	9 [1.3]	11 [1.5]
Nose	(50)	(49)	(50)	(50)
Inflammation, Suppurative	16 [1.1]	32 [1.9]	49 [2.7]	50 [3.1]
Olfactory Epithelium, Atrophy	3 [1.0]	46 [1.2]	42 [1.2]	31 [1.2]
Olfactory Epithelium, Hyperplasia		25 [1.2]	17 [1.0]	8 [1.1]
Olfactory Epithelium, Metaplasia, Respiratory	5 [1.4]	24 [1.3]	44 [2.3]	50 [3.1]

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Lab: BNW

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Olfactory Epithelium, Respiratory Metaplasia, Atypical		14 [2.0]	9 [1.1]	1 [1.0]
Respiratory Epithelium, Accumulation, Hyaline Droplet	13 [1.2]	29 [1.1]	29 [1.1]	7 [1.0]
Respiratory Epithelium, Erosion		1 [1.0]		
Respiratory Epithelium, Hyperplasia	44 [1.4]	41 [1.1]	36 [1.2]	19 [1.0]
Respiratory Epithelium, Metaplasia, Squamous	3 [1.0]	45 [1.0]	35 [1.1]	33 [1.2]
Respiratory Epithelium, Vacuolization Cytoplasmic		41 [1.2]	39 [1.2]	37 [1.4]
Squamous Epithelium, Erosion	1 [1.0]	1 [1.0]	2 [1.0]	
Turbinate, Atrophy	3 [1.3]	25 [1.3]	49 [2.1]	50 [3.3]
Trachea	(48)	(47)	(48)	(50)
Inflammation, Suppurative Epithelium, Vacuolization Cytoplasmic		14 [1.4]	31 [1.6]	37 [1.4]

## SPECIAL SENSES SYSTEM

Eye	(47)	(46)	(43)	(45)
Cataract	1 [3.0]			1 [2.0]
Cornea, Inflammation, Chronic Active	4 [2.8]	1 [2.0]	1 [1.0]	
Harderian Gland	(49)	(48)	(48)	(50)
Hyperplasia	1 [3.0]			2 [1.5]
Zymbal's Gland	(0)	(1)	(0)	(0)
Inflammation, Suppurative		1 [2.0]		

## URINARY SYSTEM

Kidney	(50)	(49)	(49)	(50)
Cyst	1 [2.0]	1 [2.0]		
Infarct	2 [2.0]	4 [3.5]	1 [3.0]	3 [2.3]
Nephropathy	46 [1.5]	44 [1.4]	42 [1.3]	37 [1.1]
Thrombosis			1 [2.0]	
Arteriole, Inflammation, Chronic Active				1 [3.0]
Capsule, Hemorrhage	1 [4.0]			
Pelvis, Inflammation, Suppurative	1 [2.0]			

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Lab: BNW

B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Renal Tubule, Hyperplasia		1 [2.0]	1 [3.0]	1 [2.0]
Renal Tubule, Necrosis			1 [2.0]	
Urinary Bladder	(48)	(48)	(50)	(47)
Hemorrhage				1 [3.0]
Inflammation, Chronic Active	1 [3.0]			
Arteriole, Inflammation, Chronic Active				1 [3.0]
Transitional Epithelium, Hyperplasia	1 [3.0]		1 [3.0]	

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

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Lab: BNW

B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
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**Disposition Summary**

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	9	12	19	21
Natural Death	5	2	4	3
Survivors				
Natural Death		2		
Terminal Sacrifice	36	34	27	26
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Gallbladder	(44)	(41)	(38)	(46)
Intestine Large, Cecum	(46)	(47)	(49)	(48)
Hemorrhage	1 [3.0]			
Intestine Large, Colon	(46)	(48)	(49)	(49)
Intestine Large, Rectum	(46)	(48)	(48)	(49)
Intestine Small, Duodenum	(45)	(47)	(48)	(49)
Inflammation, Acute		1 [3.0]		
Necrosis		1 [2.0]		
Intestine Small, Ileum	(45)	(46)	(49)	(49)
Intestine Small, Jejunum	(45)	(47)	(49)	(49)
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [3.0]			
Basophilic Focus	1	2	2	1
Clear Cell Focus	1	1	1	
Eosinophilic Focus	3	2	4	
Fatty Change			1 [2.0]	
Hematopoietic Cell Proliferation	1 [4.0]			
Hepatodiaphragmatic Nodule			1	1
Mixed Cell Focus		1	1	
Necrosis	6 [2.7]	3 [2.7]	2 [1.5]	1 [1.0]
Tension Lipidosis	5 [1.8]	5 [1.8]	3 [1.3]	2 [1.5]
Vacuolization Cytoplasmic	1 [1.0]	1 [2.0]		1 [2.0]

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Lab: BNW

B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Bile Duct, Cyst				1 [4.0]
Mesentery	(18)	(13)	(10)	(8)
Congestion			1 [2.0]	
Inflammation, Chronic Active		1 [2.0]		
Fat, Hemorrhage	1 [2.0]			
Fat, Necrosis	18 [2.0]	11 [2.2]	10 [2.0]	8 [2.0]
Pancreas	(50)	(50)	(50)	(49)
Atrophy	1 [1.0]		2 [2.5]	1 [1.0]
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Hyperplasia, Squamous			3 [2.3]	1 [2.0]
Metaplasia, Hepatocyte				1 [3.0]
Ulcer	2 [1.0]	2 [2.5]	1 [3.0]	
Stomach, Glandular	(48)	(50)	(49)	(49)
Metaplasia, Hepatocyte			1 [2.0]	
Ulcer	1 [1.0]	2 [2.5]		

## CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	6 [1.2]	3 [1.0]	11 [1.0]	9 [1.0]
Inflammation, Suppurative				1 [2.0]
Mineralization	1 [1.0]	1 [2.0]		
Necrosis		1 [2.0]		1 [2.0]
Thrombosis	1 [3.0]			1 [3.0]
Capillary, Hyperplasia	1 [3.0]			

## ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(48)
Hyperplasia	1 [2.0]	1 [2.0]	1 [2.0]	3 [1.7]
Hypertrophy		2 [2.0]		
Adrenal Medulla	(50)	(50)	(49)	(48)
Hyperplasia	2 [2.0]	1 [2.0]		1 [2.0]
Islets, Pancreatic	(50)	(50)	(50)	(49)

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B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Hyperplasia		2 [3.0]		1 [2.0]
Parathyroid Gland	(28)	(28)	(24)	(32)
Pituitary Gland	(47)	(50)	(48)	(49)
Pars Distalis, Angiectasis	2 [1.0]	1 [2.0]		
Pars Distalis, Hyperplasia	12 [2.0]	5 [2.2]	6 [2.5]	5 [2.2]
Thyroid Gland	(50)	(50)	(50)	(49)
Follicular Cell, Hyperplasia		1 [1.0]		

## GENERAL BODY SYSTEM

None

## GENITAL SYSTEM

Clitoral Gland	(43)	(44)	(41)	(43)
Ovary	(48)	(50)	(50)	(50)
Angiectasis				1 [3.0]
Cyst	8 [1.9]	2 [2.5]	11 [2.7]	10 [2.6]
Inflammation, Suppurative				1 [3.0]
Thrombosis	1 [4.0]		1 [4.0]	
Uterus	(49)	(50)	(50)	(50)
Angiectasis		4 [2.8]		
Inflammation, Chronic Active	2 [3.0]		1 [3.0]	
Thrombosis		2 [2.5]		1 [2.0]
Endometrium, Hyperplasia, Cystic	41 [2.8]	38 [2.5]	40 [2.3]	34 [2.2]
Vagina	(0)	(0)	(1)	(0)

## HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(11)	(8)	(7)	(1)
Iliac, Ectasia	3 [3.0]		1 [3.0]	
Lumbar, Ectasia		1 [2.0]		
Renal, Ectasia	2 [3.0]	2 [2.5]		

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Renal, Erythrophagocytosis		1 [2.0]		
Renal, Hyperplasia, Lymphoid	1 [3.0]			
Lymph Node, Bronchial	(22)	(33)	(34)	(22)
Inflammation, Suppurative				1 [4.0]
Lymph Node, Mandibular	(40)	(41)	(38)	(31)
Hyperplasia, Lymphoid		1 [4.0]		
Lymph Node, Mediastinal	(42)	(39)	(44)	(46)
Hyperplasia, Lymphoid	1 [2.0]			1 [4.0]
Inflammation, Suppurative				1 [4.0]
Lymph Node, Mesenteric	(49)	(49)	(47)	(47)
Ectasia		1 [3.0]		
Hyperplasia, Lymphoid	1 [2.0]	1 [3.0]		
Spleen	(49)	(49)	(48)	(49)
Hematopoietic Cell Proliferation	5 [2.6]	4 [2.5]	4 [3.0]	1 [2.0]
Hyperplasia, Lymphoid		1 [2.0]	1 [2.0]	
Necrosis	1 [3.0]			
Thymus	(46)	(46)	(46)	(46)
Hyperplasia, Lymphoid				1 [4.0]

## INTEGUMENTARY SYSTEM

Mammary Gland	(48)	(50)	(50)	(50)
Hyperplasia	1 [3.0]		1 [2.0]	
Skin	(50)	(50)	(49)	(50)
Inflammation, Chronic Active	2 [2.5]	1 [3.0]	2 [4.0]	

## MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Hyperostosis	1 [1.0]			
Skeletal Muscle	(0)	(2)	(1)	(0)

## NERVOUS 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)

Test Type: CHRONIC

Cobalt

Time Report Requested: 08:23:42

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 05/15/06 / 05/15/06

Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Brain	(50)	(50)	(50)	(50)
Meninges, Infiltration Cellular, Mononuclear Cell		2 [2.5]		
Peripheral Nerve	(0)	(0)	(1)	(0)

## RESPIRATORY SYSTEM

Larynx	(47)	(50)	(50)	(47)
Inflammation, Suppurative		1 [2.0]		2 [1.0]
Inflammation, Chronic			1 [2.0]	
Inflammation, Chronic Active		1 [1.0]		1 [1.0]
Respiratory Epithelium, Metaplasia, Squamous	2 [1.0]	49 [1.0]	50 [1.0]	47 [1.1]
Respiratory Epithelium, Vacuolization Cytoplasmic		24 [1.0]	31 [1.0]	34 [1.0]
Squamous Epithelium, Erosion	1 [1.0]	2 [1.0]	7 [1.0]	4 [1.0]
Squamous Epithelium, Hyperplasia	2 [1.0]	13 [1.1]	21 [1.0]	21 [1.0]
Lung	(49)	(50)	(50)	(50)
Infiltration Cellular, Histiocyte			1 [2.0]	
Inflammation, Suppurative		3 [1.3]	2 [1.0]	15 [1.7]
Proteinosis		45 [1.4]	50 [2.6]	50 [3.9]
Thrombosis			1 [3.0]	
Alveolar/bronchiolar Epithelium, Hyperplasia		49 [1.1]	49 [1.9]	50 [2.7]
Alveolar/bronchiolar Epithelium, Vacuolization Cytoplasmic		48 [1.1]	49 [1.9]	48 [3.5]
Alveolar Epithelium, Hyperplasia	2 [2.5]	27 [1.6]	26 [1.4]	41 [1.4]
Alveolar Epithelium, Metaplasia, Squamous				1 [1.0]
Alveolus, Infiltration Cellular, Histiocyte	10 [1.7]	49 [1.6]	50 [2.5]	49 [3.1]
Bronchiole, Epithelium, Erosion			4 [1.0]	3 [1.0]
Bronchiole, Epithelium, Hyperplasia		3 [1.0]	12 [1.1]	26 [1.2]
Nose	(50)	(50)	(50)	(50)
Inflammation, Suppurative	3 [1.0]	47 [2.3]	50 [3.1]	50 [3.3]
Olfactory Epithelium, Atrophy	4 [1.0]	44 [1.2]	39 [1.2]	24 [1.2]
Olfactory Epithelium, Hyperplasia	1 [1.0]	22 [1.1]	16 [1.0]	8 [1.0]
Olfactory Epithelium, Metaplasia, Respiratory	1 [1.0]	26 [1.8]	44 [2.7]	50 [3.3]
Olfactory Epithelium, Metaplasia, Squamous				1 [2.0]

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Test Type: CHRONIC

Cobalt

Time Report Requested: 08:23:42

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 05/15/06 / 05/15/06

Species/Strain: MICE/B6C3F1

Lab: BNW

B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3
Olfactory Epithelium, Respiratory Metaplasia, Atypical		18 [1.6]	14 [1.5]	1 [1.0]
Respiratory Epithelium, Accumulation, Hyaline Droplet	12 [1.0]	38 [1.1]	40 [1.2]	10 [1.0]
Respiratory Epithelium, Hyperplasia	43 [1.1]	40 [1.0]	40 [1.1]	9 [1.0]
Respiratory Epithelium, Hyperplasia, Histiocytic	1 [1.0]			
Respiratory Epithelium, Metaplasia, Squamous		49 [1.2]	49 [1.4]	50 [1.5]
Respiratory Epithelium, Vacuolization Cytoplasmic		40 [1.0]	47 [1.1]	47 [1.1]
Squamous Epithelium, Erosion		7 [1.1]	1 [1.0]	5 [1.0]
Turbinate, Atrophy		44 [2.2]	50 [2.9]	50 [3.4]
Pleura	(0)	(1)	(0)	(1)
Trachea	(48)	(50)	(48)	(49)
Inflammation, Suppurative		1 [1.0]		1 [1.0]
Epithelium, Vacuolization Cytoplasmic		26 [1.4]	37 [1.6]	39 [1.8]

## SPECIAL SENSES SYSTEM

Eye	(46)	(46)	(48)	(48)
Phthisis Bulbi		2 [2.5]		
Cornea, Inflammation, Chronic Active		2 [2.0]	1 [3.0]	
Harderian Gland	(49)	(49)	(49)	(50)
Hyperplasia	4 [2.0]	1 [3.0]	1 [2.0]	
Zymbal's Gland	(0)	(1)	(1)	(0)

## URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Amyloid Deposition	1 [4.0]			
Cyst	1 [4.0]			
Infarct		2 [2.5]	2 [2.5]	1 [3.0]
Nephropathy	35 [1.1]	31 [1.1]	20 [1.1]	19 [1.0]
Renal Tubule, Hyperplasia	1 [1.0]			
Renal Tubule, Necrosis	1 [2.0]	1 [3.0]		
Urinary Bladder	(49)	(49)	(48)	(49)

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Test Type: CHRONIC

Cobalt

Time Report Requested: 08:23:42

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 05/15/06 / 05/15/06

Species/Strain: MICE/B6C3F1

Lab: BNW

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B6C3F1 MICE FEMALE

control

1.25 mg/m3

2.5 mg/m3

5.0 mg/m3

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

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