Test Type: CHRONIC

Species/Strain: MICE/B6C3F1

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Cobalt

CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

Lab: BNW

F1_M3

C Number: C60311

Route: RESPIRATORY EXPOSURE WHOLE BODY

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

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

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

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

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)

Test Type: CHRONIC

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

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

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Cobalt

CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3	
Mixed Cell Focus	1	0.10.01	4 [0.0]	4.54.01	
Necrosis	2 [3.5]	3 [2.3]	1 [2.0]	1 [1.0]	
Tension Lipidosis	2 [1.0]	(-)	2 [1.5]	(2)	
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	1 [3.0]	
Inflammation, Suppurative		1 [1.0]		. [55]	
Mineralization	1 [1.0]	1 [2.0]			
Necrosis	. [•]	. [=.0]	1 [3.0]		
Thrombosis	1 [2.0]		. [0.0]		
Pericardium, Inflammation, Chronic	. [2.0]			1 [2.0]	
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(49)	(50)	(50)	
a - Number of animals examined microscopic					

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

CAS Number: 7440-48-4

Cobalt

Time Report Requested: 08:23:42
First Dose M/F: 05/15/06 / 05/15/06

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Opecies/Otrain: MIOE/BOOSI 1					Eab: DIVV
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]	
нурегразіа Нуреrtrophy	18 [2.0]	9 [2.0]	2 [2.0] 12 [2.0]		
Necrosis		9 [2.0]	12 [2.0]	2 [2.0]	
Adrenal Medulla	1 [1.0] (50)	(40)	(FO)	(40)	
		(49)	(50)	(48)	
Hyperplasia	2 [2.0]	2 [2.0]	(50)	(50)	
Islets, Pancreatic	(49)	(47)	(50)	(50)	
Hyperplasia	2 [2.5]	3 [2.3]	(0.0)	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)	
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	(10)	1 [3.0]	()	(00)	
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	5 [1.0]	[1.0]	0 [1.0]	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)

Test Type: CHRONIC

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Cobalt

CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3	
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 [0.0]	. [0.0]	1 [2.0]	2[0]	
Subcutaneous Tissue, Edema	1 [3.0]		. [=.0]		
MUSCULOSKELETAL SYSTEM					
	()	4>	<i>i</i> =->	()	
Bone	(50)	(49)	(50)	(50)	
Skeletal Muscle	(0)	(3)	(3)	(1)	

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)

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Cobalt

CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

Opecies/Otrain: MIOE/DOOSI 1		_			Lab. DIVV
B6C3F1 MICE MALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3	
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]	

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)

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Cobalt CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

	5.0 mg/m3	2.5 mg/m3	1.25 mg/m3	control	B6C3F1 MICE MALE
	4.14.03	0.54.43	445001		
	1 [1.0]	9 [1.1]	14 [2.0]		Olfactory Epithelium, Respiratory Metaplasia, Atypical
	7 [1.0]	29 [1.1]	29 [1.1]	13 [1.2]	Respiratory Epithelium, Accumulation, Hyaline Droplet
			1 [1.0]		Respiratory Epithelium, Erosion
	19 [1.0]	36 [1.2]	41 [1.1]	44 [1.4]	Respiratory Epithelium, Hyperplasia
	33 [1.2]	35 [1.1]	45 [1.0]	3 [1.0]	Respiratory Epithelium, Metaplasia, Squamous
	37 [1.4]	39 [1.2]	41 [1.2]		Respiratory Epithelium, Vacuolization Cytoplasmic
		2 [1.0]	1 [1.0]	1 [1.0]	Squamous Epithelium, Erosion
	50 [3.3]	49 [2.1]	25 [1.3]	3 [1.3]	Turbinate, Atrophy
	(50)	(48)	(47)	(48)	Trachea
	1 [1.0]				Inflammation, Suppurative
	37 [1.4]	31 [1.6]	14 [1.4]		Epithelium, Vacuolization Cytoplasmic
					SPECIAL SENSES SYSTEM
	(45)	(43)	(46)	(47)	Eye
	1 [2.0]	,	,	1 [3.0]	Cataract
		1 [1.0]	1 [2.0]	4 [2.8]	Cornea, Inflammation, Chronic Active
	(50)	(48)	(48)	(49)	Harderian Gland
	2 [1.5]	,	()	1 [3.0]	Hyperplasia
	(0)	(0)	(1)	(0)	Zymbal's Gland
	(-)	(-)	1 [2.0]	(-7	Inflammation, Suppurative
					URINARY SYSTEM
	(50)	(49)	(49)	(50)	Kidnev
	()	(/			
	3 [2 3]	1 [3 0]			•
	o. []		[]	.0 [0]	
	1 [3 0]	1 [2.0]			
	. [0.0]			1 [4 0]	
					•
_	(50) 3 [2.3] 37 [1.1] 1 [3.0]	(49) 1 [3.0] 42 [1.3] 1 [2.0]		(50) 1 [2.0] 2 [2.0] 46 [1.5] 1 [4.0] 1 [2.0]	Inflammation, Suppurative

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

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Cobalt

CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

Lab: BNW

86C3F1 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 ***

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)

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

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

Time Report Requested: 08:23:42 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	
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]	

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)

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

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

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

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	. [=.0]	2 [2.0]	. [=.0]	• [····]	
Adrenal Medulla	(50)	(50)	(49)	(48)	
Hyperplasia	2 [2.0]	1 [2.0]	()	1 [2.0]	
Islets, Pancreatic	(50)	(50)	(50)	(49)	
,	(/	(/	(/	(/	

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)

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

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

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

Species/Strain. MICE/BOCSF1					Lab. DINVV
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]	(10)	(10)	
Pars Distalis, Hyperplasia	12 [2.0]	5 [2.2]	6 [2.5]	5 [2.2]	
Thyroid Gland	(50)	(50)	(50)	(49)	
Follicular Cell, Hyperplasia	(33)	1 [1.0]	(66)	(10)	
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]			

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

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

Cobalt

CAS Number: 7440-48-4

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

Lab: BNW

B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3	
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]	
NTEGUMENTARY 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]	(00)	(00)	(50)	
Skeletal Muscle	(0)	(2)	(1)	(0)	
OKOIOKAI WIUSOIG	(0)	(2)	(1)	(0)	

NERVOUS SYSTEM

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P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

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

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY	
Charles (Ctualing MICE/DCCCE)	

Species/Strain: MICE/B6C3F1

Openies/Otrain: Wilde/Boodi 1					Eab: DIVV
B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3	
Brain Meninges, Infiltration Cellular, Mononuclear Cell	(50)	(50) 2 [2.5]	(50)	(50)	
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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Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 09/08/2011 AVERAGE SEVERITY GRADES[b]

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

Time Report Requested: 08:23:42 First Dose M/F: 05/15/06 / 05/15/06

B6C3F1 MICE FEMALE	control	1.25 mg/m3	2.5 mg/m3	5.0 mg/m3	
Olfactory Epithelium, Respiratory Metaplasia,		18 [1.6]	14 [1.5]	1 [1.0]	
Atypical 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

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

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Cobalt

CAS Number: 7440-48-4

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

Lab: BNW

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

*** END OF REPORT ***