

**Experiment Number:** 60311 - 03

**Test Type:** 90-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)**

Cobalt

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

**Date Report Requested:** 08/16/2012

**Time Report Requested:** 08:59:19

**First Dose M/F:** 03/08/05 / 03/07/05

**Lab:** BNW

F2\_R2

**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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FISCHER 344 RATS MALE	control	0.625 MG/M3	1.25 MG/M3	2.5 MG/M3	5.0 MG/M3
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**Disposition Summary**

<b>Animals Initially In Study</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Early Deaths</b>					
<b>Survivors</b>					
<b>Terminal Sacrifice</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Animals Examined Microscopically</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>

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ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)
Liver	(10)	(0)	(0)	(1)	(10)
Hepatodiaphragmatic Nodule	1 (10%)			1 (100%)	
Pancreas	(10)	(0)	(0)	(0)	(10)
Duct, Cyst	1 (10%)				
Salivary Glands	(10)	(0)	(0)	(0)	(10)
Inflammation, Acute					1 (10%)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)
Hyperplasia, Squamous	1 (10%)				
Stomach, Glandular	(10)	(0)	(0)	(0)	(10)

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CARDIOVASCULAR SYSTEM

Heart	(10)	(0)	(0)	(0)	(10)
Cardiomyopathy	8 (80%)				5 (50%)

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ENDOCRINE SYSTEM

Adrenal Cortex	(10)	(0)	(0)	(0)	(10)
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a - Number of animals examined microscopically at site and number of animals with lesion

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FISCHER 344 RATS MALE	control	0.625 MG/M3	1.25 MG/M3	2.5 MG/M3	5.0 MG/M3
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(10)
Parathyroid Gland	(10)	(0)	(0)	(0)	(7)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(10)

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GENERAL BODY SYSTEM

None

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GENITAL SYSTEM

Epididymis	(10)	(10)	(10)	(10)	(10)
Preputial Gland	(10)	(0)	(0)	(0)	(10)
Prostate	(10)	(0)	(1)	(0)	(9)
Seminal Vesicle	(10)	(0)	(0)	(0)	(10)
Testes	(10)	(10)	(10)	(10)	(10)

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HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(0)	(0)	(0)	(10)
Lymph Node	(0)	(0)	(0)	(0)	(1)
Pancreatic, Pigmentation					1 (100%)
Lymph Node, Mandibular	(0)	(0)	(0)	(0)	(1)
Lymph Node, Mediastinal	(9)	(0)	(0)	(0)	(7)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(10)
Spleen	(10)	(0)	(0)	(0)	(10)
Thymus	(10)	(0)	(0)	(0)	(10)

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INTEGUMENTARY SYSTEM

Mammary Gland	(7)	(0)	(0)	(0)	(7)
Skin	(10)	(0)	(0)	(0)	(10)

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FISCHER 344 RATS MALE	control	0.625 MG/M3	1.25 MG/M3	2.5 MG/M3	5.0 MG/M3
<b>MUSCULOSKELETAL SYSTEM</b>					
Bone	(10)	(0)	(0)	(0)	(10)
<b>NERVOUS SYSTEM</b>					
Brain	(10)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>					
Larynx	(10)	(0)	(0)	(0)	(10)
Lung	(10)	(10)	(10)	(10)	(10)
Inflammation, Chronic Active		10 (100%)	10 (100%)	10 (100%)	10 (100%)
Alveolar Epithelium, Hyperplasia					2 (20%)
Alveolus, Hemorrhage	2 (20%)		2 (20%)	4 (40%)	4 (40%)
Alveolus, Proteinosis		10 (100%)	10 (100%)	10 (100%)	10 (100%)
Bronchiole, Epithelium, Hyperplasia			10 (100%)	10 (100%)	10 (100%)
Nose	(10)	(10)	(10)	(10)	(10)
Olfactory Epithelium, Degeneration			2 (20%)	9 (90%)	10 (100%)
Olfactory Epithelium, Hyperplasia			2 (20%)	6 (60%)	10 (100%)
Respiratory Epithelium, Hyperplasia			3 (30%)	9 (90%)	10 (100%)
Respiratory Epithelium, Metaplasia, Squamous					1 (10%)
Turbinates, Atrophy				3 (30%)	9 (90%)
Trachea	(10)	(0)	(0)	(0)	(10)
<b>SPECIAL SENSES SYSTEM</b>					
Eye	(10)	(0)	(0)	(0)	(10)
Retina, Atrophy	1 (10%)				
Harderian Gland	(10)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	1 (10%)				

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**FISCHER 344 RATS MALE**

**control**

**0.625 MG/M3**

**1.25 MG/M3**

**2.5 MG/M3**

**5.0 MG/M3**

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**URINARY SYSTEM**

Kidney	(9)	(0)	(0)	(0)	(10)
Nephropathy	4 (44%)				1 (10%)
Urinary Bladder	(10)	(0)	(0)	(0)	(10)

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

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Lab: BNW

## FISCHER 344 RATS FEMALE

control

0.625 MG/M3

1.25 MG/M3

2.5 MG/M3

5.0 MG/M3

**Disposition Summary**

<b>Animals Initially In Study</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Early Deaths</b>					
<b>Survivors</b>					
<b>Terminal Sacrifice</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Animals Examined Microscopically</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>

## ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)
Liver	(10)	(1)	(0)	(0)	(10)
Hepatodiaphragmatic Nodule		1 (100%)			1 (10%)
Pancreas	(10)	(0)	(0)	(0)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(0)	(10)

## CARDIOVASCULAR SYSTEM

Heart	(10)	(0)	(0)	(0)	(10)
Cardiomyopathy	2 (20%)				3 (30%)

## ENDOCRINE SYSTEM

Adrenal Cortex	(10)	(0)	(0)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(10)
Parathyroid Gland	(7)	(0)	(0)	(0)	(8)

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FISCHER 344 RATS FEMALE	control	0.625 MG/M3	1.25 MG/M3	2.5 MG/M3	5.0 MG/M3
Pituitary Gland	(10)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(10)

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GENERAL BODY SYSTEM

None

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GENITAL SYSTEM

Clitoral Gland	(10)	(0)	(0)	(0)	(10)
Ovary	(10)	(0)	(0)	(1)	(10)
Cyst				1 (100%)	
Uterus	(10)	(0)	(0)	(0)	(10)

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HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(0)	(0)	(0)	(10)
Lymph Node, Mediastinal	(8)	(0)	(0)	(0)	(8)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(10)
Spleen	(10)	(0)	(0)	(0)	(10)
Thymus	(10)	(0)	(0)	(0)	(10)

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INTEGUMENTARY SYSTEM

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

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MUSCULOSKELETAL SYSTEM

Bone	(10)	(0)	(0)	(0)	(10)
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<b>NERVOUS SYSTEM</b>					
Brain	(10)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>					
Larynx	(10)	(0)	(0)	(0)	(10)
Lung	(10)	(10)	(10)	(10)	(10)
Inflammation, Chronic Active	2 (20%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)
Alveolar Epithelium, Hyperplasia					1 (10%)
Alveolus, Hemorrhage			3 (30%)	1 (10%)	2 (20%)
Alveolus, Proteinosis		10 (100%)	10 (100%)	10 (100%)	10 (100%)
Bronchiole, Epithelium, Hyperplasia			10 (100%)	10 (100%)	10 (100%)
Nose	(10)	(10)	(10)	(10)	(10)
Olfactory Epithelium, Degeneration			5 (50%)	10 (100%)	10 (100%)
Olfactory Epithelium, Hyperplasia				3 (30%)	10 (100%)
Respiratory Epithelium, Hyperplasia		1 (10%)		9 (90%)	10 (100%)
Respiratory Epithelium, Necrosis			1 (10%)		
Turbinate, Atrophy				4 (40%)	6 (60%)
Trachea	(10)	(0)	(0)	(0)	(10)
<b>SPECIAL SENSES SYSTEM</b>					
Eye	(10)	(0)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(0)	(10)
<b>URINARY SYSTEM</b>					
Kidney	(10)	(0)	(0)	(0)	(10)
Nephropathy					2 (20%)
Urinary Bladder	(10)	(0)	(0)	(0)	(10)

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control

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

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