

**Experiment Number:** 60311 - 01

**Test Type:** 14-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Cobalt

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

**Date Report Requested:** 09/13/2016

**Time Report Requested:** 11:25:33

**First Dose M/F:** 08/02/04 / 08/02/04

**Lab:** BNW

**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:** 3.0.2.3\_002  
**PWG Approval Date:** NONE

Experiment Number: 60311 - 01

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Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

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Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0
		0	0	0	0	0
		1	1	1	1	1
		6	6	6	6	6
<b>CONTROL</b>	ANIMAL ID	0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
		1	2	3	4	5
<b>* TOTALS</b>						

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	<b>5</b>
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**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	<b>5</b>
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**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

Lymph Node, Mediastinal			+	+		<b>2</b>
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**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

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First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
		0	0	0	0	0	
<b>CONTROL</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
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**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
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Nose	+	+	+	+	+	<b>5</b>
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**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	<b>5</b>
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Urinary Bladder	+	+	+	+	+	<b>5</b>
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**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
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\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
		6	6	6	6	6	
<b>2.5 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		2	2	2	2	2	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
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 Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Cobalt  
 CAS Number: 7440-48-4

Date Report Requested: 09/13/2016  
 Time Report Requested: 11:25:33  
 First Dose M/F: 08/02/04 / 08/02/04  
 Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
	<b>2.5 MG/M3</b>						
ANIMAL ID		0	0	0	0	0	
		0	0	0	0	0	
		2	2	2	2	2	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+		<b>5</b>
Nose	+	+	+	+	+		<b>5</b>

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+		<b>5</b>
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\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

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Species/Strain: RATS/F 344/N

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Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
		0	0	0	0	0	
<b>5 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		4	4	4	4	4	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

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Test Type: 14-DAY

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Time Report Requested: 11:25:33

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 08/02/04 / 08/02/04

Species/Strain: RATS/F 344/N

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
	<b>5 MG/M3</b>						
ANIMAL ID		0	0	0	0	0	
		0	0	0	0	0	
		4	4	4	4	4	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+		<b>5</b>
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Nose	+	+	+	+	+		<b>5</b>
------	---	---	---	---	---	--	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+		<b>5</b>
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\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
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Test Type: 14-DAY

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Time Report Requested: 11:25:33

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 08/02/04 / 08/02/04

Species/Strain: RATS/F 344/N

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
		0	0	0	0	0	
<b>10 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		6	6	6	6	6	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

Lymph Node, Mediastinal							<b>2</b>
		+		+			

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically



Experiment Number: 60311 - 01

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Species/Strain: RATS/F 344/N

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First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
<b>10 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		6	6	6	6	6	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
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**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Urinary Bladder	+	+	+	+	+	<b>5</b>
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**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
----------------	---	---	---	---	---	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
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Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

	DAY ON TEST	0	0	0	0	0	
<b>FISCHER 344 RATS MALE</b>		0	0	0	0	0	
		0	0	0	0	1	
<b>20 MG/M3</b>		5	5	9	5	3	
	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		8	8	8	8	8	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+		<b>5</b>
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**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+		<b>5</b>
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**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
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Species/Strain: RATS/F 344/N

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First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	1	
		5	5	9	5	3	
		0	0	0	0	0	
<b>20 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		8	8	8	8	8	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
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**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
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Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	<b>5</b>
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Urinary Bladder	+	+	+	+	+	<b>5</b>
-----------------	---	---	---	---	---	----------

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
----------------	---	---	---	---	---	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
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First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		5	7	6	6	7	
<b>40 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		1	1	1	1	1	
		0	0	0	0	0	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	<b>5</b>
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**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	<b>5</b>
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**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Testes				+		<b>1</b>
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**HEMATOPOIETIC SYSTEM**

Lymph Node				+		<b>1</b>
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Lymph Node, Bronchial	+					<b>1</b>
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**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

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First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS MALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		5	7	6	6	7	
		0	0	0	0	0	
<b>40 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		1	1	1	1	1	
		0	0	0	0	0	
		0	0	0	0	0	
		1	2	3	4	5	

\* TOTALS

NONE

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
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**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
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Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	<b>5</b>
--------	---	---	---	---	---	----------

Urinary Bladder	+	+	+	+	+	<b>5</b>
-----------------	---	---	---	---	---	----------

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
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\*\*\* END OF MALE DATA \*\*\*

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

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Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

	DAY ON TEST	0	0	0	0	0	
<b>FISCHER 344 RATS FEMALE</b>		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
<b>CONTROL</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		0	0	0	0	0	
		1	2	3	4	5	<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	5
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**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	5
---------------	---	---	---	---	---	---

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
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Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

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Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0
		0	0	0	0	0
		1	1	1	1	1
		6	6	6	6	6
<b>CONTROL</b>	ANIMAL ID	0	0	0	0	0
		0	0	0	0	0
		1	1	1	1	1
		0	0	0	0	0
		1	2	3	4	5
<b>* TOTALS</b>						

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
-------	---	---	---	---	---	----------

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	<b>5</b>
--------	---	---	---	---	---	----------

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
----------------	---	---	---	---	---	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
		0	0	0	0	0	
<b>2.5 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		3	3	3	3	3	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically



Experiment Number: 60311 - 01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 09/13/2016

Test Type: 14-DAY

Cobalt

Time Report Requested: 11:25:33

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 08/02/04 / 08/02/04

Species/Strain: RATS/F 344/N

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
		6	6	6	6	6	
<b>2.5 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		3	3	3	3	3	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
----------------	---	---	---	---	---	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 09/13/2016

Test Type: 14-DAY

Cobalt

Time Report Requested: 11:25:33

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 7440-48-4

First Dose M/F: 08/02/04 / 08/02/04

Species/Strain: RATS/F 344/N

Lab: BNW

	DAY ON TEST	0	0	0	0	0	
<b>FISCHER 344 RATS FEMALE</b>		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
<b>5 MG/M3</b>		0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	
		5	5	5	5	5	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

Lymph Node	+	1
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**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
	<b>5 MG/M3</b>						
ANIMAL ID		0	0	0	0	0	
		0	0	0	0	0	
		5	5	5	5	5	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+		<b>5</b>
------	---	---	---	---	---	--	----------

Nose	+	+	+	+	+		<b>5</b>
------	---	---	---	---	---	--	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+		<b>5</b>
----------------	---	---	---	---	---	--	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
	<b>10 MG/M3</b>						
ANIMAL ID		0	0	0	0	0	
		0	0	0	0	0	
		7	7	7	7	7	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		1	1	1	1	1	
		6	6	6	6	6	
	<b>10 MG/M3</b>						
ANIMAL ID		0	0	0	0	0	
		0	0	0	0	0	
		7	7	7	7	7	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**NERVOUS SYSTEM**

Brain	+	+	+	+	+		<b>5</b>
-------	---	---	---	---	---	--	----------

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+		<b>5</b>
------	---	---	---	---	---	--	----------

Nose	+	+	+	+	+		<b>5</b>
------	---	---	---	---	---	--	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+		<b>5</b>
----------------	---	---	---	---	---	--	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	1	1	0	1	
		5	6	6	7	3	
		0	0	0	0	0	
<b>20 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		9	9	9	9	9	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	5
-------	---	---	---	---	---	---

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	5
---------------	---	---	---	---	---	---

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016

Time Report Requested: 11:25:33

First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	1	1	0	1	
		5	6	6	7	3	
		0	0	0	0	0	
<b>20 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		0	0	0	0	0	
		9	9	9	9	9	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
-------	---	---	---	---	---	----------

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	<b>5</b>
--------	---	---	---	---	---	----------

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
----------------	---	---	---	---	---	----------

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

Experiment Number: 60311 - 01  
 Test Type: 14-DAY  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344/N

**P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016  
 Time Report Requested: 11:25:33  
 First Dose M/F: 08/02/04 / 08/02/04  
 Lab: BNW

		0	0	0	0	0	
<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		6	5	6	6	7	
	<b>40 MG/M3</b>						
ANIMAL ID		0	0	0	0	0	
		1	1	1	1	1	
		1	1	1	1	1	
		0	0	0	0	0	
		1	2	3	4	5	
							<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Liver + + + + + 5

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland + + + M + 4

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



Experiment Number: 60311 - 01

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Cobalt

CAS Number: 7440-48-4

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First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

<b>FISCHER 344 RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		6	5	6	6	7	
		0	0	0	0	0	
<b>40 MG/M3</b>	ANIMAL ID	0	0	0	0	0	
		1	1	1	1	1	
		1	1	1	1	1	
		0	0	0	0	0	
		1	2	3	4	5	
<b>* TOTALS</b>							

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	<b>5</b>
-------	---	---	---	---	---	----------

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

Nose	+	+	+	+	+	<b>5</b>
------	---	---	---	---	---	----------

Trachea			+		+	<b>2</b>
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**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	<b>5</b>
--------	---	---	---	---	---	----------

Urinary Bladder			+		+	<b>2</b>
-----------------	--	--	---	--	---	----------

**SYSTEMIC LESIONS**

Multiple Organ	+	+	+	+	+	<b>5</b>
----------------	---	---	---	---	---	----------

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

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically