Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
CONTROL	ANIMAL ID	0 0 0 0	0 0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5	* TOTALS
ALIMENTARY SYSTEM	I		ı	ı		1	
Liver		+	+	+	+	+	5
CARDIOVASCULAR SY	/STEM						
NONE							
ENDOCRINE SYSTEM							
Thyroid Gland		+	М	+	+	М	3
GENERAL BODY SYST	EM						
NONE							
GENITAL SYSTEM							
NONE							
HEMATOPOIETIC SYS	TEM						
NONE							
INTEGUMENTARY SYS	STEM						
NONE							
MUSCULOSKELETAL S	SYSTEM						

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
CONTROL	ANIMAL ID	0 0 0 0 1	0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5	
		-					* TOTALS
NERVOUS SYSTEM							
NONE		•					
RESPIRATORY SYSTE	M						
Lung		+	+	+	+	+	5
Nose		+	+	+	+	+	5
SPECIAL SENSES SYS	STEM						
NONE							
URINARY SYSTEM		-					
• · · · · · · · · · · · · · · · · · · ·							

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

²⁾ Mild

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

ANIMAL ID 2 2 2 2 2 2 2	6C3F1 MICE MALE 1		ANIMAL ID	0 2 0 1	2 0 2	2 0 3		2 0 5	* TOTALS
		5 MG/M3		0	0			0	
5 MG/M3	DAY ON TEST $\begin{vmatrix} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{vmatrix}$	6C3F1 MICE MALE	DAT ON TEST	0 0 1 7	0 1 7	0 1 7	0 1 7	1	

ENDOCRINE SYSTEM

NONE

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Spleen 1

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CAS Number: 7440-48-4

Cobalt

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
2.5 MG/M3	ANIMAL ID	0 0 2 0 1	0 0 2 0 2	0 0 2 0 3	0 0 2 0 4	0 0 2 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung Alveolus, Infiltration Cellular, Histiocyte Bronchiole, Epithelium, Vacuolization Cytoplasmic	+ 1 1	1	+	+ 1 1		5 2 1.0 4 1.0
Nose	+	+	+	+	-	5
Olfactory Epithelium, Atrophy	1	1	1	1		5 1.0
Olfactory Epithelium, Necrosis			1	1		2 1.0
Respiratory Epithelium, Vacuolization Cytoplasmic		1	1	1		4 1.0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1) Minimal 3) Moderate

2) Mild 4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
5 MG/M3	ANIMAL ID	0 0 4 0 1	0 0 4 0 2	0 0 4 0 3	0 0 4 0 4	0 0 4 0 5	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion present I .. Insufficient tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

²⁾ Mild 4) Marked

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
5 MG/M3	ANIMAL ID	0 0 4 0 1	0 0 4 0 2	0 0 4 0 3	0 0 4 0 4	0 0 4 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung Alveolar/bronchiolar Epithelium, Karyomegaly Alveolus, Infiltration Cellular, Histiocyte Bronchiole, Epithelium, Vacuolization Cytoplasmic	+ 1 1 1	+ 1 1	+ 1 1	+ 1 1		5 4 1.0 5 1.0 3 1.0
Nose	+	+	+	+	-	5
Inflammation, Acute		1				1 1.0
Olfactory Epithelium, Atrophy	1	1	1	1		5 1.0
Olfactory Epithelium, Necrosis	1	1		1		3 1.0
Respiratory Epithelium, Vacuolization Cytoplasmic	1	1	1	1		5 1.0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

²⁾ Mild

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

NONE						 	
ALIMENTARY SYSTEM	1						
10 MG/M3	ANIMAL ID	0 0 6 0 1	0 0 6 0 2	0 0 6 0 3	0 0 6 0 4		* TOTAL
B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7		

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Spleen 1

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CAS Number: 7440-48-4

Cobalt

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
10 MG/M3	ANIMAL ID	0 0 6 0 1	0 0 6 0 2	0 0 6 0 3	0 0 6 0 4	0 0 6 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung	+	+	+	+	5
Alveolar/bronchiolar Epithelium, Karyomegaly	1	1	1	1	5 1.0
Alveolus, Infiltration Cellular, Histiocyte	2	1	2	1	5 1.4
Bronchiole, Epithelium, Vacuolization Cytoplasmic	1	1	2	2	5 1.6
Interstitium, Fibrosis	1	1			3 1.0
Nose	+	+	+	+	5
Inflammation, Acute	3	2	2	2	5 2.4
Olfactory Epithelium, Atrophy	2	2	2	2	5 1.8
Respiratory Epithelium, Metaplasia, Squamous		1	1	1	4 1.0
Respiratory Epithelium, Vacuolization Cytoplasmic	1	1	1	1	4 1.0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CAS Number: 7440-48-4

Cobalt

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

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

A .. Autolysis precludes evaluation

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion presentI .. Insufficient tissue

¹⁾ Minimal 3) Moderate

²⁾ Mild

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

B6C3F1 MICE MALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7				
20 MG/M3	ANIMAL ID	0 0 8 0 1	0 0 8 0 2	0 0 8 0 3	0 0 8 0 4				* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung	+	+	+	+	5	
Alveolar/bronchiolar Epithelium, Karyomegaly	2	1	2	2		5 1.8
Alveolus, Infiltration Cellular, Histiocyte	3	3	2	2		5 2.4
Bronchiole, Epithelium, Vacuolization Cytoplasmic	1			1		3 1.0
Interstitium, Fibrosis	3	2	2	2		5 2.2
Nose	+	+	+	+	5	
Inflammation, Acute	1	2	2	2		5 1.6
Olfactory Epithelium, Atrophy	2	2	1	2		5 1.8
Olfactory Epithelium, Necrosis	1	1	1	2		5 1.2
Respiratory Epithelium, Metaplasia, Squamous	1	1	1			4 1.0
Respiratory Epithelium, Vacuolization Cytoplasmic	1	1	2	1		5 1.2

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

A .. Autolysis precludes evaluation

X .. Lesion present I .. Insufficient tissue BLANK .. Not examined microscopically

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE MALE	DAY ON TEST	0 0 0 5	0 0 1 7	0 0 0 5	0 0 1 7	0 0 0 8	
40 MG/M3	ANIMAL ID	0 1 0 0	0 1 0 0 2	0 1 0 0 3	0 1 0 0 4	0 1 0 0 5	* TOTALS
ALIMENTARY SYSTEM			1	1			TOTALS
Liver		+	+	+	+	+	5
CARDIOVASCULAR SYS	STEM	•	•		•	•	
NONE							
ENDOCRINE SYSTEM							
Thyroid Gland		+	+	+	+	+	5
GENERAL BODY SYSTE	M						
NONE			•	•	•	•	
GENITAL SYSTEM							
NONE		_				-	
HEMATOPOIETIC SYSTI	EM						
NONE						_	
INTEGUMENTARY SYST	EM						
NONE							
MUSCULOSKELETAL S	YSTEM						
NONE							

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Experiment Number: 60311 - 02

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: 14-DAY

Lung	+	+	+	+	+	5		
Inflammation, Acute	2		1		2	3	1.	.7
Alveolar/bronchiolar Epithelium, Karyomegaly		2	1	2	1	4	1.	.5
Alveolus, Infiltration Cellular, Histiocyte	2	3	1	3	1	5	2	.0
Bronchiole, Epithelium, Necrosis	1					1	1.	.0
Bronchiole, Epithelium, Vacuolization Cytoplasmic		1		2	1	3	1.	.3
Interstitium, Fibrosis		3		4	1	3	2	.7
					_	5		
Nose	+	+	+	+	+	5		
Nose Inflammation, Acute	+ 1	+ 2	+ 2	+ 3	+ 1		1.	.8
	1	+ 2 2	+ 2 2	•	+ 1 1	5	1 2	
Inflammation, Acute	+ 1 2	_	+ 2 2 1	3	+ 1 1 1	5 4		.0
Inflammation, Acute Olfactory Epithelium, Atrophy	1 2	_	+ 2 2 1	3	+ 1 1 1	5 4 5	2	.0 .4
Inflammation, Acute Olfactory Epithelium, Atrophy Olfactory Epithelium, Necrosis	1 2	_	+ 2 2 1	3	+ 1 1 1	5 4 5 2	2	.0 .4 .0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney + + + + + + +

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

^{1-4 ..} Lesion qualified as:

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

*** END OF MALE DATA ***

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

²⁾ Mild 4) Marked

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
CONTROL	ANIMAL ID	0 0 1 0	0 0 1 0 2	0 0 1 0 3	0 0 1 0 4	0 0 1 0 5	* TOTALS
ALIMENTARY SYSTEM		1 .			<u> </u>	<u> </u>	TOTALS
Liver		+	+	+	+	+	5
CARDIOVASCULAR SY	STEM	•	•	•			
NONE							
ENDOCRINE SYSTEM		·					
Thyroid Gland		+	+	+	+	+	5
GENERAL BODY SYSTI	EM						
NONE							
GENITAL SYSTEM							
NONE							
HEMATOPOIETIC SYST	EM						
NONE							
INTEGUMENTARY SYS	TEM						
NONE							
MUSCULOSKELETAL S	SYSTEM						
NONE							

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

X .. Lesion present

I .. Insufficient tissue

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

^{+ ..} Tissue examined microscopically

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
CONTROL	ANIMAL ID	0 0 1 0	0 0 1 0 2	0 0 1 0 3	0 0 1 0 4	0 0 1 0 5	* TOTALS
NEDVOUS SYSTEM						-	TOTALO
NERVOUS SYSTEM							
NONE					_		
RESPIRATORY SYSTEM	Λ						
Lung		+	+	+	+	+	5
Nose		+	+	+	+	+	5
SPECIAL SENSES SYST	ГЕМ						
NONE							
URINARY SYSTEM							
Kidney				+	+	+	5

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

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

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

Lab: BNW

	DAY ON TEST	0 0	0 0	0 0	0 0 1	0		
B6C3F1 MICE FEMALE		7	7	7	7	7		
2.5 MG/M3	ANIMAL ID	0 0 3 0	0 0 3 0 2	0 0 3 0 3	0 0 3 0 4	0 0 3 0 5	* 70-	T .1.0
		<u> </u>		3	4	5	* TO	TALS
ALIMENTARY SYSTEM								
NONE								
CARDIOVASCULAR SY	'STEM							
NONE								
ENDOCRINE SYSTEM								
NONE								
GENERAL BODY SYST	EM							
NONE								
GENITAL SYSTEM								
Ovary				+			1	
HEMATOPOIETIC SYST	ГЕМ							
NONE								

MUSCULOSKELETAL SYSTEM

INTEGUMENTARY SYSTEM

NONE

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

¹⁾ Minimal 3) Moderate

²⁾ Mild

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: 14-DAY

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
2.5 MG/M3	ANIMAL ID	0 0 3 0 1	0 0 3 0 2	0 0 3 0 3	0 0 3 0 4	0 0 3 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	5
Alveolar/bronchiolar Epithelium, Karyomegaly	1		1	1		3 1.0
Alveolus, Infiltration Cellular, Histiocyte		1			1	2 1.0
Bronchiole, Epithelium, Vacuolization Cytoplasmic		1			1	2 1.0
Nose	+	+	+	+	+	5
Olfactory Epithelium, Atrophy	2	1	2	1	1	5 1.4
Olfactory Epithelium, Necrosis			1	1	1	3 1.0
Respiratory Epithelium, Vacuolization Cytoplasmic	1	1	1	1	1	5 1.0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

A .. Autolysis precludes evaluation

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion present

I .. Insufficient tissue

²⁾ Mild 4) Marked

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CAS Number: 7440-48-4

Cobalt

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

Lab: BNW

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7
MG/M3	ANIMAL ID	7 0 0 5	7 0 0 5	7 0 0 5	7 0 0 5	7 0 0 5
		0	0 2	0 3	0 4	0 5

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

A .. Autolysis precludes evaluation

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion presentI .. Insufficient tissue

¹⁾ Minimal 3) Moderate

²⁾ Mild

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57

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

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
5 MG/M3	ANIMAL ID	0 0 5 0 1	0 0 5 0 2	00503	0 0 5 0 4	0 0 5 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	5		
Inflammation, Acute		1	1				2 '	1.0
Alveolar/bronchiolar Epithelium, Karyomegaly	1	1		1	1		4 ′	1.0
Alveolus, Infiltration Cellular, Histiocyte	1	2	1	2	1		5	1.4
Bronchiole, Epithelium, Vacuolization Cytoplasmic	1	1	1		1		4	1.0
						_		
Nose	+	+	+	+	+	5		
Nose Inflammation, Acute	+ 2	+ 2	+ 2	+ 2	•	5	5 2	2.0
	+ 2 1	+ 2 1	+ 2 2	•	2	5	5 2	_
Inflammation, Acute	+ 2 1 1	+ 2 1 1	_	2	2	5	-	1.6

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

A .. Autolysis precludes evaluation

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion present

I .. Insufficient tissue

²⁾ Mild

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

Route: RESPIRATORY EXPOSURE WHOLE BODY Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

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

M .. Missing tissue

X .. Lesion present I .. Insufficient tissue A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 **Time Report Requested:** 14:38:57

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

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

Test Type: 14-DAY

B6C3F1 MICE FEMALE	DAY ON TEST	T 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 7 7 7 7	
10 MG/M3	ANIMAL ID	0 0 0 0 0 0 0 0 0 0 0 0 0 7 7 7 7 7 7 0 0 0 0	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	5
Inflammation, Acute				1		1 1.0
Alveolar/bronchiolar Epithelium, Karyomegaly	1	1	1	2	1	5 1.2
Alveolus, Infiltration Cellular, Histiocyte	2	1	1	2	2	5 1.6
Bronchiole, Epithelium, Vacuolization Cytoplasmic		2	1	2		3 1.7
Interstitium, Fibrosis			1	1		2 1.0
Nose	+	+	+	+	+	5
	•					
Inflammation, Acute	3	3	2	2	3	5 2.6
Inflammation, Acute	3 2	•	2	2 1	3 2	-
Inflammation, Acute Olfactory Epithelium, Atrophy	3 2 2	•	2	2	3 2 1	5 2.6
Inflammation, Acute	_	•	2 2	2	3 2 1 1	5 2.6 5 1.8

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

I .. Insufficient tissue

BLANK .. Not examined microscopically

1) Minimal 3) Moderate

2) Mild

4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: 14-DAY

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

0 0 0 0 DAY ON TEST Õ Õ 0 0 1 **B6C3F1 MICE FEMALE** 7 7 7 7 7 20 MG/M3 0 0 0 0 0 0 0 0 ANIMAL ID 9 9 9 9 9 Ŏ 0 0 0 3 5 * TOTALS

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

M .. Missing tissue

X .. Lesion presentI .. Insufficient tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:1) Minimal 3) Moderate

2) Mild 4) Marked

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: 14-DAY

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	0 0 1 7	
20 MG/M3	ANIMAL ID	0 0 9 0 1	0 0 9 0 2	0 0 9 0 3	0 0 9 0 4	0 0 9 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	5			
Inflammation, Acute		1	1		1		3	1.0	
Alveolar/bronchiolar Epithelium, Karyomegaly	1		2	1	1		4	1.3	
Alveolus, Infiltration Cellular, Histiocyte	3	3	3	2	2		5	2.6	
Bronchiole, Epithelium, Vacuolization Cytoplasmic	1	1					2	1.0	
Interstitium, Fibrosis	3	2	4	3	2		5	2.8	
Nose	+	+	+	+	+	5			
Nose Inflammation, Acute	+	+ 2	+ 2	+ 2	+ 3	5	5	2.4	
	+ 3 3	+ 2 2	+ 2 2	•	+ 3 2	5	_	2.4 2.2	
Inflammation, Acute	+ 3 3 3	+ 2 2 1	+ 2 2	2	+ 3 2 1	5	5		
Inflammation, Acute Olfactory Epithelium, Atrophy	+ 3 3 3	+ 2 2 1 1	+ 2 2	2	+ 3 2 1	5	5	2.2	

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 0 6	0 0 1 7	0	0 (0		
40 MG/M3	ANIMAL ID	0 1 1 0 1	0 1 1 0 2	0 1 1 0	0 (11 11 11 11 11 11 11 11 11 11 11 11 11		* TOTALS
ALIMENTARY SYSTEM		1 -		-		<u></u>	TOTALS
Liver		+	+	+	+ -		5
CARDIOVASCULAR SYS	STEM				•		
NONE							
ENDOCRINE SYSTEM							
Thyroid Gland		+	+	+	+ +		5
GENERAL BODY SYSTE	:M						
NONE							
GENITAL SYSTEM							
NONE		•			-		
HEMATOPOIETIC SYSTE	ΞM						
Spleen		,	+				1
INTEGUMENTARY SYST	ЕМ						
NONE							
MUSCULOSKELETAL SY	YSTEM						
NONE							

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

^{1-4 ..} Lesion qualified as:

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

B6C3F1 MICE FEMALE	DAY ON TEST	0 0 0 6	0 0 1 7	0 0 1 7	0 0 0 9	0 0 0 7
40 MG/M3	ANIMAL ID	0 1 1 0 1	0 1 1 0 2	0 1 1 0 3	0 1 1 0 4	0 1 1 0 5

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Experiment Number: 60311 - 02

Species/Strain: MICE/B6C3F1

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: 14-DAY

Lung	+	+	+	+	+	5		
Inflammation, Acute	2		1				2 1	.5
Alveolar/bronchiolar Epithelium, Karyomegaly		1	1	1	1	,	4 1	.0
Alveolus, Infiltration Cellular, Histiocyte	1	3	3	2	3	1	5 2	. .4
Bronchiole, Epithelium, Vacuolization Cytoplasmic		1					1 1	.0
Interstitium, Fibrosis		4	3				2 3	i.5
Nose	+	+	+	+	+	5		
Inflammation, Acute	2	3	3	1	2	1	5 2	2
Olfactory Epithelium, Atrophy	2	2	2				3 2	0
	_	_	_				-	_
Olfactory Epithelium, Necrosis	3	1	2	1			3 1	.7
Olfactory Epithelium, Necrosis Respiratory Epithelium, Metaplasia, Squamous	3	1	1	1		;	-	
	3	1	1	1		;	3 1	1.0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney 5

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion present

A .. Autolysis precludes evaluation

I .. Insufficient tissue BLANK .. Not examined microscopically

^{1-4 ..} Lesion qualified as:

¹⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

Test Type: 14-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Cobalt

CAS Number: 7440-48-4

Date Report Requested: 09/13/2016 Time Report Requested: 14:38:57 First Dose M/F: 08/02/04 / 08/02/04

Lab: BNW

*** END OF REPORT ***

^{* ..} Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

^{+ ..} Tissue examined microscopically

X .. Lesion present