

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

C Number:	C61052B
Lock Date:	05/22/1992
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	03/08/1993

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Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 1

TRT#: 1

SEX: Male

DAY ON TEST: 641

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02210

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	Moderate
		Inflammation	Mild
		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

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First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 1

TRT#: 1

SEX: Male

DAY ON TEST: 641

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02210

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-5]

* Testes

Bilateral, Interstit Cell

Adenoma

Leukemia Mononuclear

[Adenoma TGLS = 1,3-9]

[Leukemia Mononuclear TGLS = 1,3-9]

* Thymus

Atrophy

Moderate

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

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Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 2	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 666 HISTO: 88-02211
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Nose	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Moderate
		Leukemia Mononuclear	
[Compression TGLS = 5-1]			
[Leukemia Mononuclear TGLS = 5-1]			
* Heart		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-1]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
[Leukemia Mononuclear TGLS = 2-7]			
[Nephropathy TGLS = 2-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Lactation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 2	TRT#: 1	SEX: Male	DAY ON TEST: 666
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 88-02211

ORGAN AND ACCOUNTABLE SITE STATUS			
* Parathyroid Gland		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 4-1]		
	[Leukemia Mononuclear TGLS = 4-1]		
* Preputial Gland		Ectasia	Minimal
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 3	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 639 HISTO: 88-02212
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	Coagulating Gland	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex [Leukemia Mononuclear TGLS = 6,7-9]		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis [Spermatocele TGLS = 9-9]		Inflammation	Chronic, Mild
		Spermatocele	Marked
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum [Leukemia Mononuclear TGLS = 6,7-9]		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver [Leukemia Mononuclear TGLS = 3-5]		Leukemia Mononuclear	
* Lung [Leukemia Mononuclear TGLS = 3-5]		Leukemia Mononuclear	
* Lymph Node, Bronchial [Leukemia Mononuclear TGLS = 6,7-9]		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 6,7-9]		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 3	TRT#: 1	SEX: Male	DAY ON TEST: 639
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 88-02212

ORGAN AND ACCOUNTABLE SITE STATUS

[Necrosis TGLS = 8-13]			
* Nose		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6,7-9]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Moderate
[Inflammation TGLS = 5-10]			
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Stomach, Glandular		Ulcer	Multiple, Moderate
* Testes	Bilateral	Atrophy	Moderate
		Leukemia Mononuclear	
[Atrophy TGLS = 6,7-9]			
[Leukemia Mononuclear TGLS = 6,7-9]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 4

TRT#: 1

SEX: Male

DAY ON TEST: 692

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02213

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Brain | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Parathyroid Gland |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | |

MISSING

- | | |
|-------------|-------------------------|
| * Esophagus | * Lymph Node, Bronchial |
|-------------|-------------------------|

OBSERVATIONS

- | | | | |
|--|--------|----------------------|---------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5] | | | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5] | | | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Mild |
| | Atrium | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 7-4] | | Thrombosis | Moderate |
| [Thrombosis TGLS = 7-4] | | | |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5] | | | |
| * Intestine Large, Colon | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5] | | | |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| | | Pigmentation | Moderate |
| [Leukemia Mononuclear TGLS = 10-7] | | | |
| [Nephropathy TGLS = 10-7] | | | |
| [Pigmentation TGLS = 10-7] | | | |
| * Liver | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 11-5] | | | |
| * Lung | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 4

TRT#: 1

SEX: Male

DAY ON TEST: 692

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02213

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 11-5]			
Lymph Node	Lumbar	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5]			
* Mammary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12,13-13,1,2-2,4,5,6-5]			
* Nose	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 14-1]			
[Leukemia Mononuclear TGLS = 14-1]			
* Preputial Gland		Ectasia	Moderate
		Leukemia Mononuclear	
* Prostate		Abscess	Marked
		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
		Ulcer	Moderate
* Testes	Interstit Cell	Adenoma	
	Bilateral	Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 4	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 88-02213
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ORGAN AND ACCOUNTABLE SITE STATUS

Interstit Cell	Hyperplasia Leukemia Mononuclear	Mild
[Adenoma TGLS = 16-9] [Atrophy TGLS = 15-9]		
* Thymus	Leukemia Mononuclear	
* Urinary Bladder	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 5	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 729 HISTO: 88-02214
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Moderate
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Marked
		Pigmentation	Mild
* Mammary Gland		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 1-10]			
* Prostate		Hyperplasia	Minimal
* Seminal Vesicle		Inflammation	Minimal
* Testes	Interstit Cell	Adenoma	
		Atrophy	Marked
[Adenoma TGLS = 4-9]			
[Atrophy TGLS = 2-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 5	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 88-02214

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus		Atrophy	Minimal
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PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 6

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02215

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Lymph Node, Mediastinal		Hyperplasia	Plasma Cell, Mild
* Mammary Gland		Hyperplasia	Mild
		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 7-1]		
* Preputial Gland		Ectasia	Moderate
		Inflammation	Minimal
	[Ectasia TGLS = 1-10]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3,4-13]		
* Testes	Interstit Cell	Adenoma	
		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 6	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 729 HISTO: 88-02215
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 5-9] [Atrophy TGLS = 6-9] * Thymus	Interstit Cell	Hyperplasia Atrophy	Mild Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 7	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 730 HISTO: 88-02216
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Compression	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-13]			
* Preputial Gland		Ectasia	Moderate
* Testes	Interstit Cell	Adenoma	
	Arteriole	Inflammation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 8

TRT#: 1

SEX: Male

DAY ON TEST: 640

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02217

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Minimal
[Compression TGLS = 5-1]			
* Epididymis		Inflammation	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Cytoplasmic Alteration	Moderate
		Necrosis	Mild
[Cytoplasmic Alteration TGLS = 1-5]			
[Necrosis TGLS = 1-5]			
* Lymph Node, Mediastinal		Hyperplasia	Plasma Cell, Minimal
* Mammary Gland		Lactation	Mild
* Nose		Angiectasis	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 2-14]			
* Prostate		Inflammation	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 8	TRT#: 1	SEX: Male	DAY ON TEST: 640
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 88-02217

ORGAN AND ACCOUNTABLE SITE STATUS

[Atrophy TGLS = 4-9]

* Thymus		Atrophy	Marked
* Thyroid Gland	C Cell	Adenoma	
	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 9	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 533 HISTO: 88-02218
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Hydrocephalus	Moderate
[Hydrocephalus TGLS = 3-1,13]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Moderate
* Nose		Hemorrhage	Mild
* Pancreas		Infiltration Cellular	Lymphocyte, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Hyperplasia	Mild
		Inflammation	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 498

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02219

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Mammary Gland	* Parathyroid Gland	* Trachea	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex [Leukemia Mononuclear TGLS = 5-13]	Leukemia Mononuclear	
* Adrenal Medulla [Leukemia Mononuclear TGLS = 5-13]	Leukemia Mononuclear	
* Bone Marrow	Leukemia Mononuclear	
* Brain	Leukemia Mononuclear	
* Epididymis	Leukemia Mononuclear	
* Esophagus	Leukemia Mononuclear	
* Heart	Leukemia Mononuclear	
* Intestine Small, Duodenum	Leukemia Mononuclear	
* Intestine Small, Ileum [Leukemia Mononuclear TGLS = 5-13]	Leukemia Mononuclear	
* Intestine Small, Jejunum [Adenocarcinoma TGLS = 5-13]	Adenocarcinoma	
* Kidney	Leukemia Mononuclear Nephropathy	Chronic, Mild
* Larynx	Leukemia Mononuclear	
* Liver [Leukemia Mononuclear TGLS = 3-5]	Leukemia Mononuclear	
* Lung [Leukemia Mononuclear TGLS = 1-6]	Leukemia Mononuclear	
* Lymph Node, Bronchial	Leukemia Mononuclear	
* Lymph Node, Mandibular	Leukemia Mononuclear	
* Lymph Node, Mediastinal	Leukemia Mononuclear	
* Lymph Node, Mesenteric	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 498

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02219

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose		Angiectasis	Mild
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 2-5]	
* Stomach, Forestomach		Leukemia Mononuclear	
		Ulcer	Mild
* Stomach, Glandular		Leukemia Mononuclear	
		Necrosis	Minimal
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
		Leukemia Mononuclear	
		[Adenoma TGLS = 7-9]	
* Thyroid Gland		Leukemia Mononuclear	
* Urinary Bladder		Dilatation	Moderate
		Leukemia Mononuclear	
		[Dilatation TGLS = 4-7]	
		[Leukemia Mononuclear TGLS = 4-7]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02220

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Bone | * Brain | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Larynx | * Mammary Gland | * Nose |
| * Pancreas | * Parathyroid Gland | * Prostate | * Salivary Glands |
| * Skin | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | |
|--|---|---------------|
| * Adrenal Cortex
[Leukemia Mononuclear TGLS = 11-16] | Leukemia Mononuclear | |
| * Adrenal Medulla

[Leukemia Mononuclear TGLS = 9-3]
[Pheochromocytoma Benign TGLS = 9-3]
[Pheochromocytoma Malignant TGLS = 8-13] | Leukemia Mononuclear
Pheochromocytoma Benign
Pheochromocytoma Malignant | |
| * Bone Marrow | Hyperplasia | Moderate |
| * Epididymis | Hypospermia | Marked |
| * Heart | Cardiomyopathy | Mild |
| * Kidney | Leukemia Mononuclear
Leukemia Mononuclear
Nephropathy | Chronic, Mild |
| * Liver

[Eosinophilic Focus TGLS = 4-5]
[Leukemia Mononuclear TGLS = 4,5,7-5] | Eosinophilic Focus
Leukemia Mononuclear | Moderate |
| * Lung

[Leukemia Mononuclear TGLS = 4-5] | Leukemia Mononuclear | |
| * Lymph Node, Bronchial

[Leukemia Mononuclear TGLS = 11-16] | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 11	TRT#: 1	SEX: Male	DAY ON TEST: 730
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 88-02220

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 11-16]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-16]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-16]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Adenoma TGLS = 12-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-9]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 12

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02221

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Mammary Gland	* Thymus
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Nose		Foreign Body	Moderate
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 1-10]			
* Spleen		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 3-13]		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 427

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02222

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone	Cranium	Hemorrhage	Mild
[Hemorrhage TGLS = 4-13]			
* Brain		Hemorrhage	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Congestion	Mild
		Nephropathy	Chronic, Minimal
* Liver		Congestion	Mild
* Lung		Congestion	Moderate
		Hemorrhage	Minimal
[Congestion TGLS = 2-6]			
[Hemorrhage TGLS = 2-6]			
* Lymph Node, Mandibular		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Nose		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Moderate
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
* Thymus		Hemorrhage	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02223

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Trachea		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Leukemia Mononuclear	
* Heart		Hypospermia	Marked
		Cardiomyopathy	Mild
* Intestine Small, Jejunum		Leukemia Mononuclear	
Islets, Pancreatic		Leukemia Mononuclear	
* Kidney		Hyperplasia	Mild
		Leukemia Mononuclear	
* Liver		Nephropathy	Chronic, Mild
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-15]			
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02223

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	
	[Angiectasis TGLS = 6-1]		
	[Hyperplasia TGLS = 6-1]		
	[Leukemia Mononuclear TGLS = 6-1]		
* Preputial Gland		Ectasia	Minimal
* Prostate	Epithelium	Cytoplasmic Alteration	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-13,14]		
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral	Atrophy	Marked
	[Atrophy TGLS = 3-9]		
* Thymus		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-9]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 583

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02224

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Congestion	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Hyperplasia	Marked
* Brain		Compression	Moderate
[Compression TGLS = 7-1]			
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 2-7]			
* Larynx		Infiltration Cellular	Lymphocyte, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Leukocytosis	Mild
[Leukocytosis TGLS = 3-6]			
Lymph Node	Lumbar	Hyperplasia	Plasma Cell, Marked
[Hyperplasia TGLS = 5-13]			
* Lymph Node, Bronchial		Hyperplasia	Plasma Cell, Moderate
[Hyperplasia TGLS = 5-13]			
* Lymph Node, Mediastinal		Hyperplasia	Plasma Cell, Moderate
[Hyperplasia TGLS = 5-13]			
* Mammary Gland		Lactation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 15	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 583 HISTO: 88-02224
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ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 1-13]

* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes	Interstit Cell	Adenoma	
	Bilateral	Atrophy	Marked
	Interstit Cell	Hyperplasia	Mild

[Atrophy TGLS = 4-9]

* Thymus		Atrophy	Moderate
* Urinary Bladder		Dilatation	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 16

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02225

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Parathyroid Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
* Brain		Compression	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 7-4]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Inflammation	Mild
* Mammary Gland		Lactation	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose		Angiectasis	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 16	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 729 HISTO: 88-02225
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ORGAN AND ACCOUNTABLE SITE STATUS

[Ectasia TGLS = 8-10]			
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
* Stomach, Glandular		Ulcer	Multiple, Mild
[Ulcer TGLS = 5-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 17

TRT#: 1

SEX: Male

DAY ON TEST: 695

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02226

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Atrophy	Moderate
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
		Hepatodiaphragmatic Nodule	Moderate
[Hepatodiaphragmatic Nodule TGLS = 8-5]			
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
	Acinar Cell	Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 6-10]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 17

TRT#: 1

SEX: Male

DAY ON TEST: 695

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02226

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 4,5-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Urinary Bladder [Carcinoma TGLS = 2-14]	Transit Epithe	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02227

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mesenteric	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea		

MISSING

* Mammary Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
Islets, Pancreatic		Adenoma	
[Adenoma TGLS = 4-14]			
* Kidney		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-5]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Nose		Foreign Body	Mild
		Inflammation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 18	TRT#: 1	SEX: Male	DAY ON TEST: 730
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 88-02227

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy Leukemia Mononuclear	Minimal
* Parathyroid Gland		Hyperplasia Leukemia Mononuclear	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia Leukemia Mononuclear	Mild
	[Hyperplasia TGLS = 8-1]		
	[Leukemia Mononuclear TGLS = 8-1]		
* Preputial Gland		Adenoma	
	[Adenoma TGLS = 1-10]		
* Prostate		Hyperplasia	Minimal
* Seminal Vesicle		Depletion Cellular Leukemia Mononuclear	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
	[Adenoma TGLS = 6,7-9]		
	[Leukemia Mononuclear TGLS = 6,7-9]		
* Thymus		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6,7-9]		
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 631

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02228

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Larynx	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex [Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
* Adrenal Medulla [Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Intestine Large, Colon [Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
* Intestine Small, Duodenum [Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
* Intestine Small, Ileum [Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
* Intestine Small, Jejunum [Leukemia Mononuclear TGLS = 5-13]		Leukemia Mononuclear	
Islets, Pancreatic		Hyperplasia	Moderate
* Kidney [Leukemia Mononuclear TGLS = 3-7] [Nephropathy TGLS = 3-7]		Leukemia Mononuclear Nephropathy	Chronic, Mild
* Liver [Leukemia Mononuclear TGLS = 9-5]		Leukemia Mononuclear	
* Lung [Leukemia Mononuclear TGLS = 9-5]		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 631

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02228

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-5,11-8]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,11-8]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,11-8]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,11-8]			
* Mammary Gland		Lactation	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-5]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 10-13]			
* Nose		Foreign Body	Mild
		Inflammation	Moderate
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
		Leukemia Mononuclear	
* Prostate		Inflammation	Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Stomach, Glandular		Necrosis	Moderate
* Testes	Bilateral	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
[Atrophy TGLS = 4-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 19	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 631 HISTO: 88-02228
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ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 20

TRT#: 1

SEX: Male

DAY ON TEST: 532

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02229

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	Coagulating Gland
* Epididymis	* Esophagus	Eye	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-7]			
* Bone Marrow		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,11-8]			
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-7]		Pigmentation	Mild
[Pigmentation TGLS = 4-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-6]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-7]			
* Mammary Gland		Pigmentation	Mild
[Pigmentation TGLS = 1-8]			
Mesentery	Fat	Necrosis	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 20

TRT#: 1

SEX: Male

DAY ON TEST: 532

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02229

ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Concretion Inflammation	Mild Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin		Inflammation	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Testes	Interstit Cell Bilateral	Adenoma Atrophy	Moderate
[Atrophy TGLS = 6-9]			
* Thymus		Atrophy	Marked
* Urinary Bladder		Dilatation	Moderate
[Dilatation TGLS = 5-7]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 21

TRT#: 1

SEX: Male

DAY ON TEST: 726

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02230

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Nose	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Brain		Compression	Moderate
[Compression TGLS = 7-1]			
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 5-7]			
* Liver		Basophilic Focus	Minimal
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1-10]			
* Prostate		Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 21	TRT#: 1	SEX: Male	DAY ON TEST: 726
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 88-02230

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle [Depletion Cellular TGLS = 4-10]		Inflammation Depletion Cellular	Mild Moderate
* Testes [Adenoma TGLS = 3-9] [Atrophy TGLS = 2-9]	Interstit Cell	Adenoma Atrophy	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02231

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Preputial Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Larynx		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Pigmentation	Moderate
* Nose		Foreign Body	Minimal
		Inflammation	Minimal
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-2]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 22	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 730 HISTO: 88-02231
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
		Leukemia Mononuclear	
	[Depletion Cellular TGLS = 5-10]		
	[Leukemia Mononuclear TGLS = 5-10]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-13,14,15]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
	[Adenoma TGLS = 4-9]		
* Thymus		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-2]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 667

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02232

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular |
| * Nose | * Parathyroid Gland | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Stomach, Forestomach | * Stomach, Glandular | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Thymus

OBSERVATIONS

- | | | | |
|-------------------------------------|---------------|-------------------------|---------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 3-2] | | | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| | Bilateral | Pheochromocytoma Benign | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Heart | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Bronchial | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 3-2] | | | |
| * Lymph Node, Mediastinal | | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 3-2] | | | |
| * Mammary Gland | | Lactation | Mild |
| Mesentery | Fat | Necrosis | Moderate |
| [Necrosis TGLS = 1-13] | | | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 667

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02232

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-1]

[Leukemia Mononuclear TGLS = 4-1]

* Preputial Gland

Ectasia

Mild

* Prostate

Inflammation

Moderate

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 2-5]

* Testes

Interstit Cell

Hyperplasia

Minimal

* Thyroid Gland

C Cell

Carcinoma

[Carcinoma TGLS = 5-3]

Tissue NOS

Mediastinum

Carcinoma

Metastatic (Thyroid Gland)

[Carcinoma TGLS = 3-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 644

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02233

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Rectum	* Intestine Small, Jejunum
* Parathyroid Gland	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			
* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			
* Intestine Large, Colon		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			
* Intestine Small, Duodenum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			
* Intestine Small, Ileum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Larynx		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-5]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-13,5-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 644

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02233

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Bronchial [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Mammary Gland [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Nose [Leukemia Mononuclear TGLS = 2-2]	Leukemia Mononuclear	
* Pancreas [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Pituitary Gland [Leukemia Mononuclear TGLS = 11-13,5-8]	Leukemia Mononuclear	
* Preputial Gland [Leukemia Mononuclear TGLS = 1,9-10]	Leukemia Mononuclear	
* Prostate [Leukemia Mononuclear TGLS = 1,9-10]	Inflammation Leukemia Mononuclear	Mild
* Salivary Glands [Leukemia Mononuclear TGLS = 10-2]	Leukemia Mononuclear	
* Seminal Vesicle [Leukemia Mononuclear TGLS = 10-2]	Leukemia Mononuclear	
* Skin [Leukemia Mononuclear TGLS = 10-2]	Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 10-2]	Leukemia Mononuclear	
* Stomach, Forestomach	Leukemia Mononuclear Ulcer	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 24	TRT#: 1	SEX: Male	DAY ON TEST: 644
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 88-02233

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Glandular		Leukemia Mononuclear
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear
[Adenoma TGLS = 12-9]		
[Leukemia Mononuclear TGLS = 12-9]		
* Thymus		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 2-2]		
* Urinary Bladder		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 2-2]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 684

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02234

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial	* Mammary Gland
-------------------------	-----------------

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum

OBSERVATIONS

* Adrenal Cortex		Cytoplasmic Alteration	Mild
		Hyperplasia	Mild
* Heart		Cardiomyopathy	Moderate
* Kidney		Cyst	Moderate
		Nephropathy	Chronic, Marked
	[Cyst TGLS = 3-7]		
	[Nephropathy TGLS = 1,2-7]		
* Liver		Degeneration	Cystic, Minimal
* Lung		Congestion	Moderate
		Inflammation	Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 4-1]		
* Preputial Gland		Ectasia	Moderate
* Prostate		Atrophy	Mild
		Inflammation	Mild
* Stomach, Forestomach		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 25	TRT#: 1	SEX: Male	DAY ON TEST: 684
	DOSE: CONTROL	DISP: Natural Death	HISTO: 88-02234

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Glandular		Ulcer	Moderate
* Testes	Bilateral	Necrosis	Mild
	Interstit Cell	Atrophy	Mild
		Hyperplasia	Minimal
[Atrophy TGLS = 7-9]			
* Thymus		Atrophy	Marked
* Urin Bladder			
Note: SEMINAL REFLUX.			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 26

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02235

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
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OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose		Foreign Body	Minimal
		Inflammation	Minimal
		Depletion Cellular	Moderate
* Seminal Vesicle			
[Depletion Cellular TGLS = 2-10]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thyroid Gland	Follicular Cel	Carcinoma	
	Follicular Cel	Hyperplasia	Mild
[Carcinoma TGLS = 5-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 27

TRT#: 1

SEX: Male

DAY ON TEST: 495

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02236

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------|-------------------------|---------------------------|-------------------|
| * Bone | * Brain | * Epididymis | * Esophagus |
| * Larynx | * Lymph Node, Bronchial | * Lymph Node, Mediastinal | * Mammary Gland |
| * Parathyroid Gland | * Pituitary Gland | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Stomach, Forestomach | * Trachea | * Urinary Bladder |

AUTO PRECLUDES DIAG.

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone Marrow | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Liver | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Nose | * Pancreas | * Stomach, Glandular |
| * Thyroid Gland | | | |

OBSERVATIONS

- | | | | |
|-------------------|-------------------------------------|----------------------|----------|
| * Heart | | Cardiomyopathy | Mild |
| * Lung | | Leukemia Mononuclear | |
| * Preputial Gland | | Ectasia | Moderate |
| * Prostate | | Concretion | Minimal |
| | | Inflammation | Mild |
| * Spleen | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 1-5] | | |
| * Testes | Interstit Cell | Adenoma | |
| * Thymus | | Atrophy | Marked |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 28

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02237

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
	Atrium	Dilatation	Mild
		Leukemia Mononuclear	
	[Dilatation TGLS = 6-4]		
	[Leukemia Mononuclear TGLS = 6-4]		
Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
		Leukemia Mononuclear	
* Liver			
	[Leukemia Mononuclear TGLS = 2-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-6]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Moderate
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 28	TRT#: 1	SEX: Male	DAY ON TEST: 730
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 88-02237

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-1]			
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 5-9]			
[Leukemia Mononuclear TGLS = 5-9]			
* Thymus		Atrophy	Mild
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 665

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02238

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Bone | * Brain | * Esophagus | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Mammary Gland | * Nose | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|---|-----------|-------------------------|------------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5,1-2] | | | |
| * Adrenal Medulla | | Hyperplasia | Mild |
| | | Leukemia Mononuclear | |
| | Bilateral | Pheochromocytoma Benign | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Leukemia Mononuclear | |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5,1-2] | | | |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Minimal |
| | | Pigmentation | Mild |
| [Pigmentation TGLS = 5-7] | | | |
| * Liver | | Leukemia Mononuclear | |
| | | Necrosis | Mild |
| [Leukemia Mononuclear TGLS = 6-5] | | | |
| * Lung | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 3-6] | | | |
| * Lymph Node, Bronchial | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5,1-2] | | | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5,1-2] | | | |
| * Lymph Node, Mediastinal | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 665

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02238

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-5,1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,1-2]			
* Pancreas		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-6]			
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-6]			
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Stomach, Forestomach		Hyperplasia	Mild
* Stomach, Glandular		Ulcer	Moderate
* Testes	Bilateral	Atrophy	Marked
[Atrophy TGLS = 7-9]			
* Thymus		Atrophy	Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 30

TRT#: 1

SEX: Male

DAY ON TEST: 681

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02239

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Larynx	* Lymph Node, Mesenteric
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Brain		Hemorrhage	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Congestion	Moderate
* Lung		Congestion	Moderate
		Hemorrhage	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Galactocele	Moderate
* Nose		Osteoma	
		Polyp, Inflammatory	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-1]		
* Preputial Gland		Ectasia	Mild
* Thymus		Atrophy	Moderate
		Hemorrhage	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02240

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 2-7]			
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
[Hemorrhage TGLS = 5-8]			
* Lymph Node, Mesenteric		Hemorrhage	Moderate
[Hemorrhage TGLS = 5-8]			
* Mammary Gland		Lactation	Moderate
* Nose		Angiectasis	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Preputial Gland		Ectasia	Mild
* Testes		Atrophy	Marked
	Interstit Cell	Hyperplasia	Mild
[Hyperplasia TGLS = 1-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02240

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 32

TRT#: 1

SEX: Male

DAY ON TEST: 654

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02241

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea			

AUTO PRECLUDES DIAG.

* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Seminal Vesicle
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OBSERVATIONS

* Brain		Compression	Mild
[Compression TGLS = 5-1]			
* Epididymis		Spermatocele	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Congestion	Mild
[Congestion TGLS = 3-5]			
* Lung		Congestion	Mild
[Congestion TGLS = 1-6]		Hemorrhage	Moderate
[Hemorrhage TGLS = 1-6]			
* Lymph Node, Mediastinal		Hemorrhage	Marked
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Preputial Gland		Ectasia	Moderate
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Atrophy TGLS = 6-9]	Bilateral	Atrophy	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 32	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 654 HISTO: 88-02241
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ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus	Atrophy	Moderate
* Urinary Bladder [Dilatation TGLS = 2-7]	Hemorrhage Dilatation	Minimal Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 611

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02242

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 4,10-2]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
		Sarcoma	Metastatic (Skin)
[Leukemia Mononuclear TGLS = 5-5]			
[Sarcoma TGLS = 5-5]			
* Lung		Sarcoma	Metastatic (Skin)
[Sarcoma TGLS = 2-6]			
* Lymph Node, Mediastinal		Sarcoma	Metastatic (Skin)
* Nose		Angiectasis	Mild
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin	Subcut Tiss	Sarcoma	
[Sarcoma TGLS = 1-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 33	TRT#: 1	SEX: Male	DAY ON TEST: 611
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 88-02242

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 6,7-9]		Atrophy	Mild
[Atrophy TGLS = 11-9]			
* Thymus		Atrophy	Moderate
* Thyroid Gland	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 34	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 88-02243

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Skin
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MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]			
* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Esophagus		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]			
* Intestine Large, Colon		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]			
* Intestine Large, Rectum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]			
* Intestine Small, Duodenum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]			
* Kidney		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-7]			
* Larynx		Leukemia Mononuclear	
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-5]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02243

ORGAN AND ACCOUNTABLE SITE STATUS

Lymph Node	Inguinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Mammary Gland		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Nose		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-18,4-19,5-20,6-8,7-5]		
* Pituitary Gland	Pars Distalis	Cyst	Mild
	[Leukemia Mononuclear TGLS = 10-1]	Leukemia Mononuclear	
* Preputial Gland		Abscess	Marked
	[Abscess TGLS = 1-17]		
* Prostate		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-17]		
* Salivary Glands		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-17]		
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02243

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2,3-5,13,14]

* Stomach, Forestomach

Hyperplasia

Moderate

Leukemia Mononuclear

Ulcer

Moderate

* Stomach, Glandular

Leukemia Mononuclear

* Testes

Bilateral

Atrophy

Moderate

Leukemia Mononuclear

* Thymus

Leukemia Mononuclear

* Thyroid Gland

Leukemia Mononuclear

* Trachea

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 35

TRT#: 1

SEX: Male

DAY ON TEST: 415

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02244

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Preputial Gland

OBSERVATIONS

* Heart		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
* Kidney	Renal Tubule	Cytoplasmic Alteration	Moderate
	[Cytoplasmic Alteration TGLS = 1-7]		
* Lung	Mediastinum	Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Minimal
	Bronchus	Hyperplasia	Moderate
	[Alveolar/Bronchiolar Carcinoma TGLS = 4-6,13,3-15]		
	[Alveolar/Bronchiolar Carcinoma TGLS = 4-6,13,3-15]		
* Lymph Node, Bronchial		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Thymus		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
Tissue NOS	Thoracic	Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 2-14]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 35

TRT#: 1

SEX: Male

DAY ON TEST: 415

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02244

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 617

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02245

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Granuloma Sperm	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Hydronephrosis	Mild
	Pelvis	Hyperplasia	Moderate
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Developmental Malformation	Mild
		Fatty Change	Mild
	[Developmental Malformation TGLS = 3-5]		
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Marked
* Stomach, Forestomach		Hyperplasia	Mild
		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2-9]		
* Thymus		Atrophy	Moderate
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 617

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02245

ORGAN AND ACCOUNTABLE SITE STATUS

[Hyperplasia TGLS = 1-7]

[Inflammation TGLS = 1-7]

Inflammation

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 666

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02246

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Parathyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Adrenal Medulla	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Bone Marrow	Leukemia Mononuclear
* Brain	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 8,10-1]	
* Epididymis	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 8,10-1]	
* Heart	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 8,10-1]	
* Intestine Large, Cecum	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Intestine Large, Colon	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Intestine Large, Rectum	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Intestine Small, Duodenum	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Intestine Small, Ileum	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Intestine Small, Jejunum	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]	
* Kidney	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 8,10-1]	
* Larynx	Leukemia Mononuclear
* Liver	Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 666

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02246

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
Lymph Node	Inguinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Mammary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Moderate
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Stomach, Glandular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13,7-8,9-2,3-5]			
* Testes	Interstitial Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:13
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 37	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 666 HISTO: 88-02246
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ORGAN AND ACCOUNTABLE SITE STATUS

Interstit Cell	Hyperplasia Leukemia Mononuclear	Minimal
[Adenoma TGLS = 6-9]		
* Thymus	Leukemia Mononuclear	
* Thyroid Gland	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02247

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Pituitary Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Mild
		Mixed Cell Focus	Multiple, Mild
[Basophilic Focus TGLS = 5-5]			
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 1-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 39

TRT#: 1

SEX: Male

DAY ON TEST: 525

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02248

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mediastinal	* Parathyroid Gland
---------------------------	---------------------

OBSERVATIONS

* Brain		Compression	Moderate
		Hydrocephalus	Moderate
[Compression TGLS = 2-13]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Hyperplasia	Mild
		Inflammation	Mild
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
* Nose		Angiectasis	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 666

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02249

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Brain		Compression	Moderate
		Hydrocephalus	Mild
[Compression TGLS = 3-1]			
* Epididymis		Inflammation	Moderate
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 1-7]			
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Mild
* Testes		Atrophy	Moderate
* Thymus		Atrophy	Mild
* Thyroid Gland	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 624

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02250

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
		[Leukemia Mononuclear TGLS = 2-7]	
		[Nephropathy TGLS = 2-7]	
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-5]	
* Lung		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-5]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-5]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 624

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02250

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-9]

[Leukemia Mononuclear TGLS = 4-9]

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 563

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02251

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Hyperplasia	Moderate
* Brain		Hydrocephalus	Mild
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Hepatocellular Adenoma	
		Leukemia Mononuclear	
	[Hepatocellular Adenoma TGLS = 4-13]		
	[Leukemia Mononuclear TGLS = 3-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Mammary Gland		Lactation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 2-1]		
	[Leukemia Mononuclear TGLS = 2-1]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 563

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02251

ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland

Ectasia

Mild

Inflammation

Minimal

* Prostate

Inflammation

Mild

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-5]

* Testes

Interstit Cell

Hyperplasia

Minimal

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02252

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Nose	* Parathyroid Gland
* Skin	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Hyperplasia	Mild
		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-5]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-8,5-16]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-8,5-16]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-8,5-16]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-8,5-16]		
* Mammary Gland		Lactation	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02252

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 7-5]			
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-1]			
* Preputial Gland		Ectasia	Moderate
		Leukemia Mononuclear	
[Ectasia TGLS = 1-10]			
[Leukemia Mononuclear TGLS = 1-10]			
* Prostate		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-10]			
* Salivary Glands		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-10]			
* Seminal Vesicle		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-15]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,14]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Interstitial Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 6-9]			
[Leukemia Mononuclear TGLS = 6-9]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-9]			
* Urinary Bladder		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 639

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02253

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
		Mixed Cell Focus	Mild
	[Leukemia Mononuclear TGLS = 4-5]		
* Lung		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Mild
* Skin	Inguinal	Squamous Cell Carcinoma	
	[Squamous Cell Carcinoma TGLS = 3-13]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:13

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02254

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Minimal
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Nose		Angiectasis	Moderate
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Moderate
		Inflammation	Mild
		[Ectasia TGLS = 1-10]	
		[Inflammation TGLS = 1-10]	
* Prostate		Hyperplasia	Minimal
		Inflammation	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 45	TRT#: 1	SEX: Male	DAY ON TEST: 730
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 88-02254

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 2-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02255

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Mixed Cell Focus	Multiple, Moderate
* Lung	Alveolar Epith	Hyperplasia	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Congestion	Mild
[Congestion TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02256

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Adrenal Medulla

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Infiltration Cellular	Lymphocyte, Minimal
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 48

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02257

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Mild
		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 49

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02258

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Eosinophilic Focus	Minimal
		Fatty Change	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
[Ectasia TGLS = 1-10]			
[Inflammation TGLS = 1-10]			
* Prostate		Inflammation	Moderate
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 50

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02259

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Angiectasis	Mild
* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Inflammation	Mild
* Liver		Basophilic Focus	Minimal
		Hemorrhage	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Intermed	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 1-1]			
* Preputial Gland		Ectasia	Minimal
		Inflammation	Mild
* Prostate		Inflammation	Mild
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 51

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02260

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Epididymis		Mesothelioma Nos	Metastatic (Testes)
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Minimal
		Inflammation	Minimal
* Prostate		Concretion	Minimal
		Inflammation	Minimal
* Testes	Interstit Cell	Hyperplasia	Mild
		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 1-9,13]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tissue NOS		Mesothelioma Malignant	Metastatic (Testes)
[Mesothelioma Malignant TGLS = 2-9,13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 52

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02261

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Larynx
* Liver	* Mammary Gland	* Nose	* Parathyroid Gland
Penis	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Intestine Small, Ileum		Hemorrhage	Mild
[Hemorrhage TGLS = 7-8]			
* Kidney	Bilateral	Carcinoma	
[Carcinoma TGLS = 5-7,13,6-7]		Nephropathy	Chronic, Mild
* Lung	Mediastinum	Carcinoma	Metastatic (Kidney)
[Carcinoma TGLS = 2-13]		Carcinoma	Metastatic (Kidney)
[Carcinoma TGLS = 2-13]			
* Lymph Node, Bronchial		Carcinoma	Metastatic (Kidney)
[Carcinoma TGLS = 3-5,2-5]		Hemorrhage	Mild
[Hemorrhage TGLS = 8-8,3-5]			
* Lymph Node, Mandibular		Hemorrhage	Mild
[Hemorrhage TGLS = 8-8,3-5]			
* Lymph Node, Mediastinal		Carcinoma	Metastatic (Kidney)
[Carcinoma TGLS = 3-5,2-5]		Hemorrhage	Moderate
[Hemorrhage TGLS = 8-8,3-5]			
* Lymph Node, Mesenteric		Hemorrhage	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 52

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02261

ORGAN AND ACCOUNTABLE SITE STATUS

[Hemorrhage TGLS = 8-8,3-5]

* Pancreas		Carcinoma	Metastatic (Kidney)
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Mild
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Testes	Interstit Cell	Hyperplasia	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 53

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02262

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Clear Cell Focus	Minimal
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-6,13]			
* Lymph Node, Mandibular		Hemorrhage	Mild
[Hemorrhage TGLS = 1-2]			
* Lymph Node, Mediastinal		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-2]			
* Pancreas	Acinar Cell	Atrophy	Mild
		Infiltration Cellular	Lymphocyte, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Moderate
		Inflammation	Minimal
* Prostate		Inflammation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 54

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02263

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Nose		Foreign Body	Minimal
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Moderate
		Inflammation	Minimal
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Thymus		Atrophy	Minimal
* Urinary Bladder		Calculus Micro Observation Only	Moderate
[Calculus Micro Observation Only TGLS = 3-7]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 55

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02264

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
		Inflammation	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild
* Thyroid Gland	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 56

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02265

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Infiltration Cellular	Lymphocyte, Mild
* Liver		Clear Cell Focus	Minimal
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 2,3-6,13]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Mild
		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 113

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 672

HISTO: 88-02322

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 2-7]			
* Liver		Basophilic Focus	Moderate
		Fatty Change	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Mammary Gland		Galactocele	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Moderate
* Testes		Atrophy	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 114

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02323

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Multiple, Minimal
		Eosinophilic Focus	Mild
* Lung		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-10]			
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 114	TRT#: 2	SEX: Male	DAY ON TEST: 730
	DOSE: 37.5 PPM	DISP: Terminal Sacrifice	HISTO: 88-02323

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus	Atrophy	Mild
PRIMARY CAUSE OF DEATH	-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 115

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02324

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Mild
		Mixed Cell Focus	Mild
[Mixed Cell Focus TGLS = 2-5]			
* Lung		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Preputial Gland		Ectasia	Minimal
* Prostate		Hyperplasia	Mild
* Spleen	Capsule	Fibrosis	Minimal
[Fibrosis TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 115

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02324

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 116

TRT#: 2

SEX: Male

DAY ON TEST: 576

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02325

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Benign	
* Brain		Compression	Moderate
[Compression TGLS = 3-13]			
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Fatty Change	Minimal
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 1-14]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 117

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 471

HISTO: 88-02326

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Brain		Compression	Mild
		Hydrocephalus	Moderate
		Infiltration Cellular	Lymphocyte, Mild
[Compression TGLS = 3-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Inflammation	Minimal
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 118

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02327

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Nose	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Minimal
* Brain		Compression	Moderate
[Compression TGLS = 5-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 3-7]			
* Liver		Degeneration	Cystic, Minimal
		Fatty Change	Minimal
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Lactation	Mild
* Mammary Gland		Atrophy	Mild
* Pancreas	Acinar Cell	Hyperplasia	Mild
* Parathyroid Gland		Adenoma	
* Pituitary Gland	Pars Distalis		
[Adenoma TGLS = 4-1]			
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1-10]			
* Testes	Arteriole	Inflammation	Mild
[Inflammation TGLS = 2-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 119

TRT#: 2

SEX: Male

DAY ON TEST: 551

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02328

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Kidney	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pituitary Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Mammary Gland	* Parathyroid Gland
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AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Marked
* Heart		Cardiomyopathy	Mild
[Cardiomyopathy TGLS = 2-4]			
Islets, Pancreatic		Adenoma	
[Adenoma TGLS = 2-4]			
* Liver		Basophilic Focus	Minimal
Note: TAN COLOR DUE TO AUTOLYTIC CHANGE.			
* Lung		Leukocytosis	Moderate
[Leukocytosis TGLS = 3-6]			
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hyperplasia	Plasma Cell, Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-13]			
* Prostate		Concretion	Minimal
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes	Interstit Cell	Hyperplasia	Mild
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 119

TRT#: 2

SEX: Male

DAY ON TEST: 551

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02328

ORGAN AND ACCOUNTABLE SITE STATUS

Hemorrhage

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 120

TRT#: 2

SEX: Male

DAY ON TEST: 695

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02329

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 1-7]			
* Liver		Degeneration	Cystic, Minimal
		Fatty Change	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 3-3]			
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Hyperplasia	Moderate
[Angiectasis TGLS = 6-1]			
[Hyperplasia TGLS = 6-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Skin	Pinna	Parakeratosis	Moderate
[Parakeratosis TGLS = 4-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 120	TRT#: 2	SEX: Male	DAY ON TEST: 695
	DOSE: 37.5 PPM	DISP: Moribund Sacrifice	HISTO: 88-02329

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach		Hyperplasia	Mild
		Inflammation	Mild
[Hyperplasia TGLS = 7-4]			
[Inflammation TGLS = 7-4]			
* Testes	Interstit Cell	Adenoma	
		Degeneration	Mild
[Adenoma TGLS = 5-9]			
[Degeneration TGLS = 5-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 121

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02330

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Nose	* Pancreas	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Moderate
	[Leukemia Mononuclear TGLS = 5-7]		
	[Nephropathy TGLS = 5-7]		
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Moderate
		Hepatocellular Adenoma	
		Leukemia Mononuclear	
	[Degeneration TGLS = 4-5]		
	[Hepatocellular Adenoma TGLS = 3-13]		
	[Leukemia Mononuclear TGLS = 2-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Lymph Node, Bronchial		Hemorrhage	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 121

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02330

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Lactation	Moderate
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Mild
* Prostate	Epithelium	Cytoplasmic Alteration	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5,15]			
* Testes	Bilateral	Degeneration	Mild
	Interstit Cell	Hyperplasia	Mild
	Arteriole	Inflammation	Moderate
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 122

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02331

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Moderate
		Mesothelioma Malignant	Metastatic (Testes)
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Minimal
		Degeneration	Cystic, Mild
		Fatty Change	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
		[Depletion Cellular TGLS = 3-10]	
* Spleen		Mesothelioma Malignant	Metastatic (Testes)

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 122	TRT#: 2	SEX: Male	DAY ON TEST: 729
	DOSE: 37.5 PPM	DISP: Terminal Sacrifice	HISTO: 88-02331

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral, Interstit Cell	Adenoma Mesothelioma Malignant	
	[Adenoma TGLS = 1,2-9] [Mesothelioma Malignant TGLS = 1,2-9]		
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 123

TRT#: 2

SEX: Male

DAY ON TEST: 645

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02332

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Mammary Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Marked
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Degeneration	Cystic, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Adenoma	
		[Adenoma TGLS = 1-13]	
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 3,4-9]	
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 124

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02333

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
		[Adenoma TGLS = 2-1]	
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 1-9]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 125

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02334

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Clear Cell Focus	Multiple, Minimal
		Degeneration	Cystic, Minimal
		Eosinophilic Focus	Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Parathyroid Gland		Hyperplasia	Minimal
Pharynx	Palate	Hyperplasia	Squamous, Marked
[Hyperplasia TGLS = 1-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 126

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02335

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Compression	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Hepatodiaphragmatic Nodule	Mild
[Hepatodiaphragmatic Nodule TGLS = 2-13]			
* Lymph Node, Mandibular		Pigmentation	Minimal
* Lymph Node, Mediastinal		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Mild
[Depletion Cellular TGLS = 3-10]			
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
[Adenoma TGLS = 4-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 126

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02335

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 127

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02336

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Minimal
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Brain		Compression	Moderate
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Moderate
		Eosinophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mandibular		Cyst	Moderate
		Hyperplasia	Plasma Cell, Moderate
[Cyst TGLS = 7-2]			
[Hyperplasia TGLS = 7-2]			
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Hyperplasia	Mild
		Inflammation	Mild
[Hyperplasia TGLS = 3-10]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 127

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02336

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Arteriole	Inflammation	Mild
* Thymus		Atrophy	Mild
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 2,6-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 128

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02337

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone	Coccygeal	Fracture	Moderate
[Fracture TGLS = 2-13]			
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Minimal
		Eosinophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 129

TRT#: 2

SEX: Male

DAY ON TEST: 636

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02338

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Small, Duodenum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Cyst	Moderate
		Nephropathy	Chronic, Moderate
[Cyst TGLS = 6-7]			
[Nephropathy TGLS = 2-7]			
* Liver		Eosinophilic Focus	Mild
		Necrosis	Minimal
* Lung		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pancreas		Inflammation	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Marked
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Spleen		Congestion	Mild
[Congestion TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-9]			
* Thymus		Atrophy	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 129

TRT#: 2

SEX: Male

DAY ON TEST: 636

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02338

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 130

TRT#: 2

SEX: Male

DAY ON TEST: 718

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02339

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mesenteric	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 1-3]			
* Brain		Compression	Mild
[Compression TGLS = 2-1]			
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 10-7]			
* Liver		Basophilic Focus	Minimal
		Degeneration	Cystic, Minimal
		Fatty Change	Mild
* Lung		Congestion	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Nose		Angiectasis	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 6,7-3]			
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 3-1]			
* Preputial Gland		Ectasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 130	TRT#: 2	SEX: Male	DAY ON TEST: 718
	DOSE: 37.5 PPM	DISP: Natural Death	HISTO: 88-02339

ORGAN AND ACCOUNTABLE SITE STATUS

[Ectasia TGLS = 4,5-10]			
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 8,9-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 131

TRT#: 2

SEX: Male

DAY ON TEST: 645

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02340

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Kidney	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Salivary Glands
* Seminal Vesicle	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Liver		Fatty Change	Marked
		Necrosis	Mild
[Fatty Change TGLS = 3-5]			
[Necrosis TGLS = 3-5]			
* Lung	Goblet Cell	Hyperplasia	Mild
		Inflammation	Moderate
	Artery	Thrombosis	Mild
[Hyperplasia TGLS = 2-6,13]			
[Inflammation TGLS = 2-6,13]			
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Mild
* Skin		Trichoepithelioma	
[Trichoepithelioma TGLS = 1-14]			
* Spleen		Hematopoietic Cell Proliferation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 131	TRT#: 2	SEX: Male	DAY ON TEST: 645
	DOSE: 37.5 PPM	DISP: Natural Death	HISTO: 88-02340

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach [Ulcer TGLS = 5-4]		Ulcer	Moderate
* Stomach, Glandular		Necrosis	Mild
* Testes [Adenoma TGLS = 4-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate
		Hemorrhage	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 132

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02341

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mesenteric	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Minimal
* Brain		Compression	Mild
		Hydrocephalus	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 2-7]		
* Liver		Fatty Change	Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 6-13]		
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
	[Fibroadenoma TGLS = 1-14]		
* Nose	Nasolacrim Dct	Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 5-1]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 132	TRT#: 2	SEX: Male	DAY ON TEST: 729
	DOSE: 37.5 PPM	DISP: Terminal Sacrifice	HISTO: 88-02341

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular	Moderate
* Stomach, Forestomach		Ulcer	Multiple, Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 133

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02342

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	Lacrimal Gland
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Minimal
[Clear Cell Focus TGLS = 4-5]			
* Lung		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
	Duct	Ectasia	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Prostate	Epithelium	Cytoplasmic Alteration	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 134

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02343

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
	Valve	Inflammation	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Nose	Nasolacrim Dct	Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 1-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Prostate		Inflammation	Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Moderate
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 135

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02344

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Bone Marrow | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Pancreas |
| * Parathyroid Gland | * Prostate | * Salivary Glands | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | | |
|--------------------------|---|----------------------------|-----------------------|
| * Adrenal Cortex | | Vacuolization Cytoplasmic | Mild |
| * Adrenal Medulla | | Pheochromocytoma Benign | |
| | | Pheochromocytoma Malignant | |
| | [Pheochromocytoma Benign TGLS = 4-3] | | |
| | [Pheochromocytoma Malignant TGLS = 4-3] | | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Moderate |
| | [Nephropathy TGLS = 5-7] | | |
| * Liver | | Basophilic Focus | Multiple, Minimal |
| | | Inflammation | Minimal |
| * Lung | Alveolar Epith | Hyperplasia | Moderate |
| * Lymph Node, Mandibular | | Hyperplasia | Plasma Cell, Moderate |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| | [Adenoma TGLS = 7-1] | | |
| * Preputial Gland | | Ectasia | Minimal |
| * Seminal Vesicle | | Depletion Cellular | Marked |
| | [Depletion Cellular TGLS = 3-10] | | |
| * Skin | Lip | Squamous Cell Carcinoma | |
| | [Squamous Cell Carcinoma TGLS = 6-13] | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 135	TRT#: 2 DOSE: 37.5 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 730 HISTO: 88-02344
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ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
	Arteriole	Inflammation	Mild
[Adenoma TGLS = 2-9]			
[Atrophy TGLS = 1-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 136

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02345

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Compression	Moderate
* Epididymis		Hypospermia	Marked
Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Multiple, Mild
		Mixed Cell Focus	Minimal
* Lung		Alveolar/Bronchiolar Adenoma	Multiple
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 4,5-13]		
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Nose		Foreign Body	Minimal
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	[Angiectasis TGLS = 2-1]		
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
	[Depletion Cellular TGLS = 3-10]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 136

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02345

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 1-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 137

TRT#: 2

SEX: Male

DAY ON TEST: 695

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02346

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Skin	Spinal Cord	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea		

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Mild
* Brain		Hemorrhage	Minimal
* Epididymis		Granuloma Sperm	Moderate
[Granuloma Sperm TGLS = 6-9]			
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Minimal
* Lung		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Marked
[Inflammation TGLS = 2-13]			
* Seminal Vesicle		Ectasia	Marked
[Ectasia TGLS = 4-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 137	TRT#: 2	SEX: Male	DAY ON TEST: 695
	DOSE: 37.5 PPM	DISP: Moribund Sacrifice	HISTO: 88-02346

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Inflammation	Moderate
[Inflammation TGLS = 3-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 138

TRT#: 2

SEX: Male

DAY ON TEST: 701

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02347

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Parathyroid Gland
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AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 2,3-7]		
* Liver		Degeneration	Cystic, Mild
* Lung		Congestion	Mild
	[Congestion TGLS = 1-6]	Hemorrhage	Minimal
	[Hemorrhage TGLS = 1-6]		
* Nose		Angiectasis	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 6-1]		
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Interstit Cell	Adenoma	
		Atrophy	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 138	TRT#: 2	SEX: Male	DAY ON TEST: 701
	DOSE: 37.5 PPM	DISP: Natural Death	HISTO: 88-02347

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 5-9]	Interstit Cell	Hyperplasia	Mild
[Atrophy TGLS = 4-9]			

PRIMARY CAUSE OF DEATH

-

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 139

TRT#: 2

SEX: Male

DAY ON TEST: 555

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02348

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Mild
		Inflammation	Minimal
* Lung		Carcinoma	Metastatic (Zymbal'S Gland)
	[Carcinoma TGLS = 3-6,14]		
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
	Respirat Epith	Metaplasia	Squamous, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2-9]		
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 139

TRT#: 2

SEX: Male

DAY ON TEST: 555

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02348

ORGAN AND ACCOUNTABLE SITE STATUS

Zymbal's Gland
[Carcinoma TGLS = 1-13]

Carcinoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 140

TRT#: 2

SEX: Male

DAY ON TEST: 702

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02349

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder		

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
		Pigmentation	Moderate
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mandibular		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 140	TRT#: 2	SEX: Male	DAY ON TEST: 702
	DOSE: 37.5 PPM	DISP: Natural Death	HISTO: 88-02349

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 2-5]		Leukemia Mononuclear	
* Stomach, Forestomach		Ulcer	Moderate
* Stomach, Glandular		Inflammation	Mild
		Necrosis	Mild
* Testes [Adenoma TGLS = 3,4,5-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 141

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02350

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Malignant	
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Minimal
Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Intermed	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
		Hyperplasia	Mild
* Prostate		Hyperplasia	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 142

TRT#: 2

SEX: Male

DAY ON TEST: 682

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02351

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Compression	Minimal
[Compression TGLS = 4-1]			
* Epididymis		Granuloma Sperm	Moderate
[Granuloma Sperm TGLS = 8-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Minimal
* Stomach, Forestomach		Hyperplasia	Mild
		Ulcer	Multiple, Mild
[Hyperplasia TGLS = 7-4]			
[Ulcer TGLS = 7-4]			
* Testes		Atrophy	Moderate
[Atrophy TGLS = 5,6-9]			
* Thymus		Thymoma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 142

TRT#: 2

SEX: Male

DAY ON TEST: 682

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02351

ORGAN AND ACCOUNTABLE SITE STATUS

[Thymoma Malignant TGLS = 1-5]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 143

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02352

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Multiple, Minimal
		Eosinophilic Focus	Mild
[Eosinophilic Focus TGLS = 5-5]			
* Lung		Inflammation	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Nose		Inflammation	Mild
	Respirat Epith	Metaplasia	Squamous, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 4-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 143

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02352

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Atrophy

Minimal

Hemorrhage

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 144

TRT#: 2

SEX: Male

DAY ON TEST: 353

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02353

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Epididymis	* Esophagus
* Heart	* Larynx	* Liver	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland
* Prostate	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea

MISSING

* Mammary Gland

AUTO PRECLUDES DIAG.

* Bone Marrow	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Kidney
Mesentery	* Nose	* Salivary Glands	* Spleen
* Urinary Bladder			

OBSERVATIONS

* Bone [Hemorrhage TGLS = 8-14]	Calvarium	Hemorrhage	Mild
* Brain [Hemorrhage TGLS = 5,7-1]		Hemorrhage	Moderate
* Lung [Congestion TGLS = 2-6]		Congestion	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland [Hemorrhage TGLS = 6-1]		Hemorrhage	Marked
* Preputial Gland [Ectasia TGLS = 1-10]		Ectasia	Moderate
* Thymus		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 145

TRT#: 2

SEX: Male

DAY ON TEST: 646

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02354

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Trachea	* Urinary Bladder

MISSING

* Adrenal Medulla	* Lymph Node, Bronchial
-------------------	-------------------------

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
		Inflammation	Mild
	Atrium	Thrombosis	Moderate
	[Thrombosis TGLS = 5-4]		
* Kidney		Nephropathy	Chronic, Mild
	[Nephropathy TGLS = 1-7]		
* Liver		Fatty Change	Moderate
		Necrosis	Minimal
	[Fatty Change TGLS = 2-5]		
	[Necrosis TGLS = 2-5]		
* Lung		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Preputial Gland		Ectasia	Marked
* Prostate		Hyperplasia	Mild
		Inflammation	Mild
* Stomach, Forestomach		Inflammation	Minimal
* Stomach, Glandular		Necrosis	Mild
		Ulcer	Multiple, Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 145	TRT#: 2	SEX: Male	DAY ON TEST: 646
	DOSE: 37.5 PPM	DISP: Moribund Sacrifice	HISTO: 88-02354

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Adenoma Atrophy	Marked
[Adenoma TGLS = 3-9] [Atrophy TGLS = 4-9]			
* Thymus		Atrophy	Marked
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 146

TRT#: 2

SEX: Male

DAY ON TEST: 436

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02355

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Kidney	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Liver		Congestion	Mild
		Hemorrhage	Minimal
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Moderate
[Hyperplasia TGLS = 2-2]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
		Inflammation	Mild
* Testes	Interstitial Cell	Hyperplasia	Mild
* Thymus		Atrophy	Mild
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 1-14]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 147

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02356

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Eosinophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-5]			
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 1-14]			
* Nose	Nasolacrim Dct	Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hemorrhage	Mild
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 3-15]			
[Hemorrhage TGLS = 3-15]			
[Hyperplasia TGLS = 3-15]			
* Preputial Gland		Ectasia	Moderate
* Testes		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
	Arteriole	Inflammation	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 147

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02356

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus	Atrophy	Mild
Tongue	Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 4-13]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 148

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02357

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Hyperplasia	Plasma Cell, Mild
		Pigmentation	Minimal
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Skin	Subcut Tiss	Abscess	Marked
* Spleen		Congestion	Mild
* Testes	Interstit Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 148

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02357

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Atrophy

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 149

TRT#: 2

SEX: Male

DAY ON TEST: 720

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02358

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| * Bone | * Brain | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Larynx | * Lung | * Lymph Node, Mediastinal | * Mammary Gland |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

AUTO PRECLUDES DIAG.

- * Intestine Small, Jejunum

OBSERVATIONS

- | | | | |
|--|---------------|----------------------------|-------------------|
| * Adrenal Cortex | | Vacuolization Cytoplasmic | Minimal |
| * Adrenal Medulla | | Pheochromocytoma Malignant | |
| [Pheochromocytoma Malignant TGLS = 4-14] | | | |
| * Bone Marrow | | Hyperplasia | Mild |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Mild |
| | | Inflammation | Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Moderate |
| | | Eosinophilic Focus | Multiple, Mild |
| | | Mixed Cell Focus | Mild |
| [Basophilic Focus TGLS = 5-15] | | | |
| [Eosinophilic Focus TGLS = 5-15] | | | |
| [Mixed Cell Focus TGLS = 5-15] | | | |
| * Lymph Node, Bronchial | | Hemorrhage | Moderate |
| * Lymph Node, Mandibular | | Hyperplasia | Plasma Cell, Mild |
| * Lymph Node, Mesenteric | | Hemorrhage | Minimal |
| * Nose | | Angiectasis | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Moderate |
| * Preputial Gland | | Adenoma | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 149	TRT#: 2	SEX: Male	DAY ON TEST: 720
	DOSE: 37.5 PPM	DISP: Natural Death	HISTO: 88-02358

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 1-13]		Ectasia	Moderate
* Prostate		Concretion	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 150

TRT#: 2

SEX: Male

DAY ON TEST: 651

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02359

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum * Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Benign	
* Brain		Compression	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Necrosis	Marked
	[Necrosis TGLS = 6-13,4-5,13]		
* Lung		Inflammation	Marked
	[Inflammation TGLS = 2-6]		
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Mammary Gland		Lactation	Moderate
* Nose		Angiectasis	Moderate
		Foreign Body	Mild
		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
	[Adenoma TGLS = 5-1]		
	[Angiectasis TGLS = 5-1]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 150	TRT#: 2	SEX: Male	DAY ON TEST: 651
	DOSE: 37.5 PPM	DISP: Natural Death	HISTO: 88-02359

ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Moderate
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-14]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Mild
* Thyroid Gland	Follicular Cel	Carcinoma	
[Carcinoma TGLS = 3-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 151

TRT#: 2

SEX: Male

DAY ON TEST: 700

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02360

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Degeneration	Cystic, Mild
		Fatty Change	Mild
* Lung		Congestion	Mild
[Congestion TGLS = 1-6]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Bilateral	Atrophy	Moderate
[Atrophy TGLS = 4-9]			
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 151

TRT#: 2

SEX: Male

DAY ON TEST: 700

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02360

ORGAN AND ACCOUNTABLE SITE STATUS

* Urinary Bladder
[Dilatation TGLS = 5-7]

Dilatation

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 152

TRT#: 2

SEX: Male

DAY ON TEST: 675

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02361

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Brain		Compression	Mild
[Compression TGLS = 3-1]			
* Epididymis		Hypospermia	Marked
* Esophagus		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 1-7]			
* Liver		Basophilic Focus	Minimal
* Lung		Congestion	Moderate
		Hemorrhage	Mild
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Moderate
* Prostate		Concretion	Mild
		Inflammation	Mild
* Skin			
Note: GROSS LESION #4 NOT PRESENT AT TRIM.			
* Testes	Bilateral	Atrophy	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 152

TRT#: 2

SEX: Male

DAY ON TEST: 675

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02361

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 153

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02362

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
* Brain		Compression	Minimal
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Minimal
* Lung		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Minimal
		Infiltration Cellular	Histiocyte, Mild
	[Alveolar/Bronchiolar Carcinoma TGLS = 1-13,14]		
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-1]		
* Preputial Gland		Ectasia	Mild
* Thymus		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 153

TRT#: 2

SEX: Male

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02362

ORGAN AND ACCOUNTABLE SITE STATUS

Hemorrhage

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 154

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02363

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Parathyroid Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Inflammation	Mild
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 4-10]			
* Spleen		Fibroma	
[Fibroma TGLS = 3-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 154

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02363

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 155

TRT#: 2

SEX: Male

DAY ON TEST: 663

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02364

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
		Pigmentation	Mild
* Larynx		Inflammation	Minimal
* Liver		Degeneration	Cystic, Mild
* Lung		Alveolar/Bronchiolar Carcinoma	
		Inflammation	Moderate
		Necrosis	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
		Inflammation	Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Pigmentation	Mild
* Nose		Foreign Body	Mild
	Goblet Cell	Hyperplasia	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Adenoma	
		Ectasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 155	TRT#: 2	SEX: Male	DAY ON TEST: 663
	DOSE: 37.5 PPM	DISP: Moribund Sacrifice	HISTO: 88-02364

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 1-13]			
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Hyperplasia	Moderate
		Inflammation	Mild
* Stomach, Glandular		Hyperplasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 156

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02365

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Mixed Cell Focus	Moderate
[Mixed Cell Focus TGLS = 1-5]			
* Lung	Alveolar Epith	Hemorrhage	Mild
		Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 157

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: 88-02366

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
* Brain		Compression	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Mammary Gland		Lactation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-13]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-14]		Ectasia	Mild
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 2-15]			
* Testes	Arteriole	Inflammation	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 158

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 568

HISTO: 88-02367

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Brain		Compression	Mild
		Hydrocephalus	Mild
[Compression TGLS = 7-1]			
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Congestion	Mild
		Fatty Change	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Galactocele	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Stomach, Forestomach		Ulcer	Mild
* Testes		Hypospermia	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 159

TRT#: 2

DOSE: 37.5 PPM

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST: 456

HISTO: 88-02368

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Hemorrhage	Minimal
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-6,14]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Moderate
* Testes	Interstitial Cell	Hyperplasia	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 160

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02369

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 161

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02370

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Minimal
		Pigmentation	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
		Hemorrhage	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Testes	Interstitial Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 162

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02371

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Minimal
* Lung		Hemorrhage	Mild
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Goblet Cell	Hyperplasia	Mild
	Respirat Epith	Hyperplasia	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Minimal
	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Testes	Interstitial Cell	Adenoma	
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 163

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02372

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	

[Adenoma TGLS = 1-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 164

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02373

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 2,3-13]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
		Inflammation	Moderate
[Inflammation TGLS = 1-10]			
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 165

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02374

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lymph Node, Mandibular
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Minimal
		Inflammation	Minimal
* Prostate		Inflammation	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 166

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02375

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Mammary Gland	* Nose	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9,13]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 167

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02376

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hemorrhage	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Moderate
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 168

TRT#: 2

SEX: Male

DAY ON TEST: 456

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02377

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Goblet Cell	Hyperplasia	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9,13]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 225

TRT#: 3

SEX: Male

DAY ON TEST: 606

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02434

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	Spinal Cord
* Spleen	* Stomach, Glandular	* Testes	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 2-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Inflammation	Minimal
* Liver		Fatty Change	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Mammary Gland		Lactation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Degeneration	Mild
		Hyperplasia	Moderate
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Mild
* Stomach, Forestomach		Hyperplasia	Mild
		Ulcer	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 226

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02435

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Brain		Compression	Moderate
* Epididymis		Mesothelioma Malignant	Metastatic (Testes)
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Degeneration	Cystic, Minimal
		Eosinophilic Focus	Mild
* Lymph Node, Mandibular		Cyst	Moderate
* Lymph Node, Mediastinal		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Inflammation	Mild
* Spleen		Hemorrhage	Mild
* Testes		Atrophy	Mild
	Arteriole	Inflammation	Mild
		Mesothelioma Malignant	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 227

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02436

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Bone Marrow | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Pancreas |
| * Parathyroid Gland | * Prostate | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | | |
|------------------------------------|---------------------------|------------------------------|-------------------|
| * Adrenal Cortex | | Hyperplasia | Mild |
| * Adrenal Medulla | | Pheochromocytoma Benign | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Minimal |
| | | Clear Cell Focus | Minimal |
| * Lung | | Alveolar/Bronchiolar Adenoma | |
| * Lymph Node, Mediastinal | | Hemorrhage | Mild |
| | | Pigmentation | Minimal |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Mild |
| * Preputial Gland | | Ectasia | Moderate |
| | | | |
| [Ectasia TGLS = 1-10] | | | |
| * Seminal Vesicle | | Depletion Cellular | Marked |
| | | | |
| [Depletion Cellular TGLS = 5-10] | | | |
| * Spleen | | Fibrosis | Mild |
| | | | |
| [Fibrosis TGLS = 3-13] | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | | | |
| [Adenoma TGLS = 4-9] | | | |
| * Thymus | | Atrophy | Minimal |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 227

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02436

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 228

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02437

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal
-------------------------	---------------------------

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Multiple, Mild
		Degeneration	Cystic, Mild
[Basophilic Focus TGLS = 3-5]			
[Clear Cell Focus TGLS = 3-5]			
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Minimal
[Alveolar/Bronchiolar Adenoma TGLS = 3-5]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 228	TRT#: 3	SEX: Male	DAY ON TEST: 730
	DOSE: 75 PPM	DISP: Terminal Sacrifice	HISTO: 88-02437

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 229

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02438

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Moderate
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Clear Cell Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 230

TRT#: 3

SEX: Male

DAY ON TEST: 631

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02439

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Salivary Glands	* Skin	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Brain		Necrosis	Mild
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4-7]			
* Liver		Degeneration	Cystic, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 2-13]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 3-13]			
* Stomach, Forestomach		Hyperplasia	Mild
		Inflammation	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6-9]			
* Thymus		Atrophy	Moderate
* Thyroid Gland	Follicular Cel	Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 230

TRT#: 3

SEX: Male

DAY ON TEST: 631

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02439

ORGAN AND ACCOUNTABLE SITE STATUS

[Carcinoma TGLS = 1-3]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 231

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02440

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Mild
[Depletion Cellular TGLS = 2-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 232

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02441

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Mild
[Eosinophilic Focus TGLS = 1-13]			
* Lymph Node, Bronchial		Pigmentation	Minimal
* Lymph Node, Mandibular		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Moderate
[Cyst TGLS = 2-1]			
* Testes		Atrophy	Minimal
	Interstitial Cell	Hyperplasia	Minimal
	Arteriole	Inflammation	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 233

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02442

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
		Hypertrophy	Mild
		Vacuolization Cytoplasmic	Mild
* Epididymis		Inflammation	Mild
		Mesothelioma Malignant	Metastatic (Testes)
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Minimal
* Nose		Foreign Body	Mild
	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Adenoma	
		Ectasia	Minimal
[Adenoma TGLS = 1-13]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 2-14]			
* Testes	Interstit Cell	Hyperplasia	Mild
		Mesothelioma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 233

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02442

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Atrophy

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 234

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02443

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Multiple, Minimal
		Eosinophilic Focus	Multiple, Moderate
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose		Foreign Body	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	[Adenoma TGLS = 3-1]		
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
	[Depletion Cellular TGLS = 4-10]		
* Testes	Interstitial Cell	Adenoma	
		Atrophy	Moderate
	Interstitial Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 234

TRT#: 3
DOSE: 75 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 730
HISTO: 88-02443

ORGAN AND ACCOUNTABLE SITE STATUS

Arteriole

Inflammation

Mild

[Adenoma TGLS = 1-9]

[Atrophy TGLS = 2-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 235

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02444

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Nose
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Larynx		Infiltration Cellular	Lymphocyte, Mild
* Liver		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Moderate
	Bile Duct	Hyperplasia	Mild
	[Eosinophilic Focus TGLS = 5-5,13]		
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
	[Lactation TGLS = 2-14]		
* Pancreas	Acinar Cell	Atrophy	Mild
	Artery	Inflammation	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Hyperplasia	Moderate
	[Hyperplasia TGLS = 1,3-10]		
* Prostate		Hyperplasia	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 235	TRT#: 3	SEX: Male	DAY ON TEST: 730
	DOSE: 75 PPM	DISP: Terminal Sacrifice	HISTO: 88-02444

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-9]

* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 236

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02445

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Multiple, Minimal
		Mixed Cell Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-1]		
* Preputial Gland		Ectasia	Mild
* Salivary Glands		Infiltration Cellular	Lymphocyte, Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 237

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02446

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 3-13]			
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Nose	Respirat Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Minimal
* Prostate		Inflammation	Minimal
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 2-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 237

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02446

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 238

TRT#: 3

DOSE: 75 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02447

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
	Atrium	Schwannoma Malignant	
	[Schwannoma Malignant TGLS = 8-13]	Thrombosis	Moderate
	[Thrombosis TGLS = 8-13]		
* Kidney		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 3,4-7]		
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Mild
* Lung	Arteriole	Inflammation	Mild
		Inflammation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
	[Adenoma TGLS = 9-1]		
	[Hyperplasia TGLS = 9-1]		
* Preputial Gland		Ectasia	Moderate
		Hyperplasia	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 238

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02447

ORGAN AND ACCOUNTABLE SITE STATUS

[Ectasia TGLS = 2-10]

[Hyperplasia TGLS = 1-10]

* Prostate

Hyperplasia

Minimal

* Seminal Vesicle

Depletion Cellular

Marked

[Depletion Cellular TGLS = 7-10]

* Testes

Interstit Cell

Adenoma

Atrophy

Moderate

Arteriole

Inflammation

Moderate

[Adenoma TGLS = 5-9]

[Atrophy TGLS = 6-9]

* Thymus

Atrophy

Mild

* Thyroid Gland

C Cell

Adenoma

[Adenoma TGLS = 10-3]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 239

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02448

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Pituitary Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
[Hypospermia TGLS = 1-9]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Multiple, Minimal
		Mixed Cell Focus	Multiple, Mild
[Mixed Cell Focus TGLS = 3,4-5,13]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mandibular		Cyst	Mild
		Hyperplasia	Plasma Cell, Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Ectasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 240

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02449

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Multiple, Mild
		Fatty Change	Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 3-13]		
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Preputial Gland		Ectasia	Moderate
* Prostate		Hyperplasia	Minimal
		Inflammation	Mild
* Spleen		Fibrosis	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1,2-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 240

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02449

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 241

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02450

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Intestine Small, Ileum		Hyperplasia	Lymphoid, Mild
* Kidney		Nephropathy	Chronic, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Marked
	[Alveolar/Bronchiolar Adenoma TGLS = 1-13]		
	[Hyperplasia TGLS = 2-13]		
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
	[Adenoma TGLS = 3-1]		
* Preputial Gland		Ectasia	Minimal
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 242

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02451

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 3,4-7]			
* Liver		Degeneration	Cystic, Mild
[Degeneration TGLS = 5-5]		Eosinophilic Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Hemorrhage	Mild
	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 243

TRT#: 3

DOSE: 75 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02452

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal
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OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Moderate
		Hepatocellular Carcinoma	
	[Hepatocellular Carcinoma TGLS = 2-13,14]		
* Lung		Alveolar/Bronchiolar Adenoma	
	[Alveolar/Bronchiolar Adenoma TGLS = 5-16]		
* Mammary Gland		Lactation	Moderate
	[Lactation TGLS = 1-8]		
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Stomach, Forestomach		Hyperplasia	Mild
		Ulcer	Mild
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 4-9]		
* Thymus		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 243

TRT#: 3
DOSE: 75 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 730
HISTO: 88-02452

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland
[Carcinoma TGLS = 3-3]

Follicular Cel

Carcinoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 244

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02453

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Degeneration	Cystic, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 245

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02454

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 1-14]			
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
	Artery	Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Ectasia	Mild
* Skin	Pinna	Fibrosarcoma	
[Fibrosarcoma TGLS = 2-13]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 246

TRT#: 3

DOSE: 75 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02455

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4,6-7]			
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[Adenoma TGLS = 8-1]			
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1,2-10]			
* Prostate		Inflammation	Moderate
* Spleen		Degeneration	Cystic, Moderate
[Degeneration TGLS = 3-5]			
* Stomach, Forestomach		Inflammation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 246	TRT#: 3	SEX: Male	DAY ON TEST: 730
	DOSE: 75 PPM	DISP: Terminal Sacrifice	HISTO: 88-02455

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 5,7-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 247

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02456

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Mild
		Mixed Cell Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-14]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 7-1]			
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 2-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 6-10]			
* Skin	Head	Basosquamous Tumor Benign	
[Basosquamous Tumor Benign TGLS = 1-13]			
* Testes	Interstitial Cell	Adenoma	
		Atrophy	Moderate
	Interstitial Cell	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:14
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 247

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02456

ORGAN AND ACCOUNTABLE SITE STATUS

Arteriole

Inflammation

Mild

[Adenoma TGLS = 5-9]

[Atrophy TGLS = 4-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 248

TRT#: 3

SEX: Male

DAY ON TEST: 540

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02457

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Testes	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Brain		Compression	Mild
[Compression TGLS = 6-14]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 1-7]			
* Larynx		Inflammation	Mild
* Liver		Fatty Change	Marked
		Inflammation	Mild
		Necrosis	Mild
[Inflammation TGLS = 3-5,13]			
[Necrosis TGLS = 3-5,13]			
* Lung		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 248

TRT#: 3

SEX: Male

DAY ON TEST: 540

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02457

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Inflammation	Moderate
* Stomach, Forestomach		Hematopoietic Cell Proliferation	Mild
		Hyperplasia	Moderate
		Ulcer	Multiple, Marked
Note: FORESTOMACH-THE ULCER HAS PERFORATED, [Ulcer TGLS = 4-4,2-4]			
* Stomach, Glandular		Ulcer	Multiple, Moderate
* Thymus		Atrophy	Marked
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

Animal Note: RESULTING IN PERITONITIS AND ADHESION TO LIVER.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 249

TRT#: 3

DOSE: 75 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02458

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Epididymis		Granuloma Sperm	Moderate
		Hypospermia	Marked
		Inflammation	Mild
	[Granuloma Sperm TGLS = 4-9]		
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 9-7]		
* Liver		Basophilic Focus	Multiple, Mild
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Moderate
	[Eosinophilic Focus TGLS = 5-15]		
* Lung		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Carcinoma TGLS = 6-13]		
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
	[Hyperplasia TGLS = 7-5]		
* Lymph Node, Mediastinal		Hyperplasia	Lymphoid, Moderate
	[Hyperplasia TGLS = 7-5]		
* Pancreas	Acinar Cell	Atrophy	Mild
		Ectopic Liver	Mild
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 249

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02458

ORGAN AND ACCOUNTABLE SITE STATUS

	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 8-1]			
[Hyperplasia TGLS = 8-1]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1,2-10]			
* Prostate		Inflammation	Minimal
* Testes	Interstit Cell	Adenoma	
	Bilateral	Atrophy	Marked
	Arteriole	Inflammation	Mild
[Atrophy TGLS = 3-9]			
* Thymus		Atrophy	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 250

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02459

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Minimal
	Bile Duct	Hyperplasia	Mild
[Hyperplasia TGLS = 1-5]			
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 2-6]			
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Minimal
* Prostate		Inflammation	Mild
* Testes	Arteriole	Inflammation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 251

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02460

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 2-7]			
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 252

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02461

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mandibular		Hemorrhage	Minimal
		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	

[Adenoma TGLS = 1,2-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:14

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 253

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02462

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 4-13]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
* Spleen		Degeneration	Cystic, Minimal
[Degeneration TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 254

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02463

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Minimal
		Eosinophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 4-1]		
* Preputial Gland		Ectasia	Moderate
* Skin	Subcut Tiss	Fibroma	
	[Fibroma TGLS = 1-13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2,3-9]		
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 254

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02463

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 255

TRT#: 3

SEX: Male

DAY ON TEST: 200

DOSE: 75 PPM

DISP: Accidentally Killed

HISTO: 88-02464

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Kidney	* Larynx	* Liver	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
Tongue	* Trachea	* Urinary Bladder	

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Bone Marrow	Hyperplasia	Minimal
* Epididymis	Mesothelioma Malignant	Metastatic (Testes)
* Heart	Cardiomyopathy	Minimal
* Lung	Congestion	Moderate
* Lymph Node, Bronchial	Hemorrhage	Mild
* Lymph Node, Mandibular	Hemorrhage	Mild
* Lymph Node, Mediastinal	Hemorrhage	Mild
* Nose	Hemorrhage	Moderate
[Hemorrhage TGLS = 5-11,14]		
* Preputial Gland	Ectasia	Mild
* Testes	Mesothelioma Malignant	
* Thymus	Hemorrhage	Mild
[Hemorrhage TGLS = 4-2]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 256

TRT#: 3

SEX: Male

DAY ON TEST: 552

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02465

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------|--------------------------|---------------------------|
| * Bone | * Epididymis | * Esophagus | * Intestine Large, Rectum |
| * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Parathyroid Gland | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |

AUTO PRECLUDES DIAG.

- * Intestine Small, Ileum

OBSERVATIONS

- | | | |
|--|----------------------|---------------|
| * Adrenal Cortex
[Leukemia Mononuclear TGLS = 5-5] | Leukemia Mononuclear | |
| * Adrenal Medulla
[Leukemia Mononuclear TGLS = 5-5] | Leukemia Mononuclear | |
| * Bone Marrow | Leukemia Mononuclear | |
| * Brain
[Leukemia Mononuclear TGLS = 4-1] | Leukemia Mononuclear | |
| * Heart | Cardiomyopathy | Mild |
| | Leukemia Mononuclear | |
| * Intestine Large, Cecum
[Leukemia Mononuclear TGLS = 5-5] | Leukemia Mononuclear | |
| * Intestine Large, Colon
[Leukemia Mononuclear TGLS = 5-5] | Leukemia Mononuclear | |
| * Intestine Small, Duodenum
[Leukemia Mononuclear TGLS = 5-5] | Leukemia Mononuclear | |
| * Kidney | Leukemia Mononuclear | |
| | Nephropathy | Chronic, Mild |
| * Liver
[Leukemia Mononuclear TGLS = 2-5] | Leukemia Mononuclear | |
| * Lung
[Leukemia Mononuclear TGLS = 6-6,13] | Leukemia Mononuclear | |
| * Lymph Node, Bronchial
[Leukemia Mononuclear TGLS = 5-5] | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 256

TRT#: 3

SEX: Male

DAY ON TEST: 552

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02465

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 5-5]		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Minimal
		Inflammation	Moderate
		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
		Leukemia Mononuclear	
		[Adenoma TGLS = 3-9]	
		[Leukemia Mononuclear TGLS = 3-9]	
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 257

TRT#: 3

DOSE: 75 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 684

HISTO: 88-02466

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Small, Duodenum	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
[Thrombosis TGLS = 6-4]			
* Kidney		Nephropathy	Chronic, Mild
* Lymph Node, Mandibular		Infiltration Cellular	Histiocyte, Moderate
* Lymph Node, Mediastinal		Infiltration Cellular	Histiocyte, Moderate
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-13]			
* Skin	Subcut Tiss	Lipoma	
[Lipoma TGLS = 2-14]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes	Bilateral	Atrophy	Marked
[Atrophy TGLS = 4-9]			
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 257

TRT#: 3

SEX: Male

DAY ON TEST: 684

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02466

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 258

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02467

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 4-7]			
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Minimal
		Eosinophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-14]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Adenoma	
		Ectasia	Minimal
[Adenoma TGLS = 1-13]			
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 258	TRT#: 3	SEX: Male	DAY ON TEST: 730
	DOSE: 75 PPM	DISP: Terminal Sacrifice	HISTO: 88-02467

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	
[Adenoma TGLS = 5-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 259

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02468

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 260

TRT#: 3

SEX: Male

DAY ON TEST: 712

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02469

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Hemorrhage	Mild
[Hemorrhage TGLS = 7-1]			
* Epididymis		Hypospermia	Marked
Eye		Hemorrhage	Moderate
[Hemorrhage TGLS = 3-11]		Inflammation	Moderate
[Inflammation TGLS = 3-11]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Moderate
* Lung		Carcinoma	Metastatic (Zymbal'S Gland)
	Artery	Inflammation	Mild
		Inflammation	Minimal
	Artery	Thrombosis	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Moderate
[Cyst TGLS = 8-1]			
[Hyperplasia TGLS = 8-1]			
* Preputial Gland		Ectasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 260

TRT#: 3

SEX: Male

DAY ON TEST: 712

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02469

ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,5-9]			
* Thymus		Atrophy	Moderate
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 2,4-13,14]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 261

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02470

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Mild
		Degeneration	Cystic, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
* Prostate		Hyperplasia	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	

[Adenoma TGLS = 1-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 262

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02471

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mediastinal	* Thymus
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OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Epididymis		Mesothelioma Malignant	Metastatic (Testes)
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Nose		Angiectasis	Moderate
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Ectasia	Minimal
* Prostate		Inflammation	Mild
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Testes		Atrophy	Mild
	Arteriole	Inflammation	Moderate
		Mesothelioma Malignant	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 263

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02472

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Heart		Cardiomyopathy	Minimal
Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Multiple, Minimal
		Eosinophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
	[Adenoma TGLS = 2-1]		
	[Angiectasis TGLS = 2-1]		
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 263

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02472

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 264

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02473

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
* Nose	Respirat Epith	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Hyperplasia	Minimal
* Seminal Vesicle		Depletion Cellular	Mild
[Depletion Cellular TGLS = 4-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 265

TRT#: 3

SEX: Male

DAY ON TEST: 667

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02474

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 1-7]			
* Liver		Fatty Change	Moderate
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Stomach, Forestomach		Hyperplasia	Moderate
		Inflammation	Marked
[Hyperplasia TGLS = 4-4]			
[Inflammation TGLS = 4-4]			
* Stomach, Glandular		Inflammation	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 265	TRT#: 3	SEX: Male	DAY ON TEST: 667
	DOSE: 75 PPM	DISP: Moribund Sacrifice	HISTO: 88-02474

ORGAN AND ACCOUNTABLE SITE STATUS

[Inflammation TGLS = 4-4]

* Testes	Bilateral	Atrophy	Mild
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 266

TRT#: 3

SEX: Male

DAY ON TEST: 719

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02475

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Spleen	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Hemorrhage	Moderate
* Brain		Compression	Mild
[Compression TGLS = 8-1]			
* Epididymis		Atrophy	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 2-7]			
* Liver	Bile Duct	Hyperplasia	Mild
		Mixed Cell Focus	Mild
* Lung		Congestion	Mild
	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 9-14]			
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 3-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Skin	Back	Squamous Cell Carcinoma	
[Squamous Cell Carcinoma TGLS = 1-13]			
* Stomach, Forestomach		Ulcer	Multiple, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 266	TRT#: 3	SEX: Male	DAY ON TEST: 719
	DOSE: 75 PPM	DISP: Natural Death	HISTO: 88-02475

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral	Atrophy	Mild
	Arteriole	Inflammation	Mild
[Atrophy TGLS = 6,7-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 267

TRT#: 3

DOSE: 75 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 703

HISTO: 88-02476

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Compression	Moderate
		Hydrocephalus	Mild
[Compression TGLS = 2-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Congestion	Mild
	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Respirat Epith	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Ectasia	Moderate
* Prostate		Inflammation	Moderate
* Testes	Interstit Cell	Adenoma	
	Arteriole	Inflammation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 268

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02477

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 3-7]			
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
[Angiectasis TGLS = 5-1]			
[Hyperplasia TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 269

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02478

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 2-13]		
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Pancreas		Infiltration Cellular	Lymphocyte, Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	[Adenoma TGLS = 3-1]		
* Preputial Gland		Ectasia	Mild
* Prostate		Hyperplasia	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 269

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02478

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 270

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02479

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Clear Cell Focus	Minimal
		Eosinophilic Focus	Mild
[Eosinophilic Focus TGLS = 2-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 4-1]			
[Hyperplasia TGLS = 4-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Mild
[Depletion Cellular TGLS = 3-10]			
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 270

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02479

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 271

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02480

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Clear Cell Focus	Minimal
		Degeneration	Cystic, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Moderate
		Inflammation	Mild
[Ectasia TGLS = 1-10]			
[Inflammation TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 272

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02481

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Minimal
* Liver		Clear Cell Focus	Mild
		Necrosis	Minimal
* Lung	Alveolar Epith	Hemorrhage	Mild
		Hyperplasia	Mild
		[Hemorrhage TGLS = 1-13]	
		[Hyperplasia TGLS = 1-13]	
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Goblet Cell	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Prostate		Inflammation	Minimal
* Testes	Interstit Cell	Hyperplasia	Mild
* Thymus		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 273

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02482

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Goblet Cell	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Ectasia	Minimal
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Testes	Interstitial Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 274

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02483

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Moderate
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Prostate		Concretion	Mild
		Inflammation	Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
	[Adenoma TGLS = 1-13]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 275

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02484

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Globet Cell	Hyperplasia	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Prostate		Congestion	Minimal
		Inflammation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 276

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02485

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
[Ectasia TGLS = 1-10]			
[Inflammation TGLS = 1-10]			
* Prostate		Concretion	Minimal
		Inflammation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 277

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02486

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Inflammation	Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
		Inflammation	Mild
* Prostate		Concretion	Minimal
* Testes	Interstitial Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 278

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02487

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 279

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02488

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Foreign Body	Minimal
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 280

TRT#: 3

SEX: Male

DAY ON TEST: 456

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02489

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pancreas	Duct	Ectasia	Minimal
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Prostate		Concretion	Minimal
		Inflammation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 337

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02546

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Esophagus	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Brain		Compression	Moderate
[Compression TGLS = 1-1]			
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Cecum		Inflammation	Minimal
* Intestine Large, Rectum		Inflammation	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Fatty Change	Moderate
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Hyperplasia	Mild
		Ulcer	Moderate
* Stomach, Glandular		Ulcer	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 337

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02546

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes		Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Moderate
		Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 338

TRT#: 4

SEX: Male

DAY ON TEST: 604

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02547

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Degeneration	Moderate
* Brain		Compression	Minimal
[Compression TGLS = 2-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mandibular		Pigmentation	Mild
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 339

TRT#: 4

SEX: Male

DAY ON TEST: 636

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02548

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Bone Marrow		Hyperplasia	Marked
* Epididymis		Mesothelioma Malignant	Metastatic (Testes)
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Minimal
		Pigmentation	Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
		Mesothelioma Malignant	Metastatic (Testes)
* Lymph Node, Bronchial		Mesothelioma Malignant	Metastatic (Testes)
* Nose		Inflammation	Mild
* Pancreas		Mesothelioma Malignant	Metastatic (Testes)
		[Mesothelioma Malignant TGLS = 1-2]	
* Preputial Gland		Ectasia	Moderate
		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
		Mesothelioma Malignant	Metastatic (Testes)
* Testes	Interstit Cell	Adenoma	
		Atrophy	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 339

TRT#: 4

SEX: Male

DAY ON TEST: 636

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02548

ORGAN AND ACCOUNTABLE SITE STATUS

Mesothelioma Malignant

[Adenoma TGLS = 4-9]

[Atrophy TGLS = 3-9]

[Mesothelioma Malignant TGLS = 5-9]

* Thymus

Atrophy

Moderate

Tissue NOS

Mesothelioma Malignant

Metastatic (Testes)

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 340

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02549

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 2-14]			
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Moderate
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Inflammation	Mild
* Prostate		Concretion	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 341

TRT#: 4

SEX: Male

DAY ON TEST: 564

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02550

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Marked
	[Thrombosis TGLS = 2-4]		
* Intestine Large, Colon		Infiltration Cellular	Lipocyte, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Congestion	Moderate
* Lung		Congestion	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 342

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02551

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Brain		Compression	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
* Mammary Gland		Lactation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-1]		
* Preputial Gland		Inflammation	Minimal
* Prostate		Hyperplasia	Mild
		Inflammation	Mild
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 343

TRT#: 4

DOSE: 150 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02552

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Mixed Cell Focus	Moderate
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Nose	Respirat Epith	Adenoma	
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 3-1]			
[Hyperplasia TGLS = 3-1]			
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 344

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02553

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Infiltration Cellular	Lymphocyte, Mild
* Liver		Hepatocellular Adenoma	
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Alveolar/Bronchiolar Carcinoma	
	[Alveolar/Bronchiolar Adenoma TGLS = 4,5-14,15]	Hyperplasia	Minimal
	[Alveolar/Bronchiolar Carcinoma TGLS = 4,5-14,15]		
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 6-1]		
* Preputial Gland		Adenoma	
	[Adenoma TGLS = 1-10]	Inflammation	Mild
* Prostate		Inflammation	Mild
* Spleen		Hematopoietic Cell Proliferation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 344

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02553

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 2-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild
* Thyroid Gland [Carcinoma TGLS = 3-13]	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 345

TRT#: 4

SEX: Male

DAY ON TEST: 722

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02554

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING

* Mammary Gland

OBSERVATIONS

* Adrenal Cortex		Congestion	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 5-3]			
* Bone Marrow		Congestion	Mild
* Brain		Compression	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
	Atrium	Dilatation	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Inflammation	Mild
* Liver		Fatty Change	Minimal
		Mixed Cell Focus	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Mild
[Alveolar/Bronchiolar Adenoma TGLS = 6-6]			
[Alveolar/Bronchiolar Carcinoma TGLS = 6-6]			
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 345

TRT#: 4

SEX: Male

DAY ON TEST: 722

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02554

ORGAN AND ACCOUNTABLE SITE STATUS

Mesentery [Necrosis TGLS = 4-14]	Fat	Necrosis	Mild
* Nose		Angiectasis	Moderate
* Pancreas	Acinar Cell	Atrophy	Marked
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Preputial Gland		Ectasia	Minimal
		Inflammation	Mild
* Prostate		Inflammation	Moderate
* Skin [Keratoacanthoma TGLS = 1-13]	Tail	Keratoacanthoma	
* Testes [Adenoma TGLS = 2,3-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Congestion	Moderate
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 346

TRT#: 4

SEX: Male

DAY ON TEST: 611

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02555

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Compression	Mild
		Hemorrhage	Minimal
	[Compression TGLS = 4-1]		
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
		Pigmentation	Mild
	[Nephropathy TGLS = 1-7]		
	[Pigmentation TGLS = 1-7]		
* Liver		Basophilic Focus	Minimal
		Fatty Change	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 3-1]		
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Degeneration	Cystic, Minimal
		Hematopoietic Cell Proliferation	Moderate
	[Degeneration TGLS = 5-13]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 346	TRT#: 4	SEX: Male	DAY ON TEST: 611
	DOSE: 150 PPM	DISP: Moribund Sacrifice	HISTO: 88-02555

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral	Atrophy	Marked
	Interstit Cell	Hyperplasia	Minimal
[Atrophy TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 347

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02556

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial	* Mammary Gland	* Pituitary Gland	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Degeneration	Cystic, Minimal
		Eosinophilic Focus	Multiple, Mild
		Infiltration Cellular	Lymphocyte, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 1-6]		
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2,3-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 348

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02557

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 6-5]			
* Mammary Gland		Galactocele	Moderate
[Galactocele TGLS = 1-14]		Hyperplasia	Mild
[Hyperplasia TGLS = 1-14]			
* Pancreas		Inflammation	Minimal
* Prostate		Hyperplasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 5-10]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 2-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-13,4-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 348

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02557

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 349

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02558

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Brain		Compression	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Congestion	Mild
		Degeneration	Cystic, Minimal
		Eosinophilic Focus	Mild
[Congestion TGLS = 3-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 5-6,13]			
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 4-1]			
[Hyperplasia TGLS = 4-1]			
* Preputial Gland		Abscess	Moderate
* Prostate		Concretion	Mild
		Inflammation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 349	TRT#: 4	SEX: Male	DAY ON TEST: 730
	DOSE: 150 PPM	DISP: Terminal Sacrifice	HISTO: 88-02558

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
	Arteriole	Inflammation	Mild
[Adenoma TGLS = 1-9]			
[Atrophy TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 350

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02559

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 1-13]			
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 350

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02559

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 351

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02560

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Marked
		Mesothelioma Malignant	Metastatic (Testes)
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
		Pigmentation	Mild
* Liver		Eosinophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Moderate
	[Hyperplasia TGLS = 5-6]		
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
Mesentery		Mesothelioma Malignant	Metastatic (Testes)
	[Mesothelioma Malignant TGLS = 1-13]		
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
	[Hyperplasia TGLS = 4-1]		
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 351	TRT#: 4	SEX: Male	DAY ON TEST: 729
	DOSE: 150 PPM	DISP: Terminal Sacrifice	HISTO: 88-02560

ORGAN AND ACCOUNTABLE SITE STATUS

Mesothelioma Malignant

[Adenoma TGLS = 3-9]

[Mesothelioma Malignant TGLS = 3-9]

* Thymus

Atrophy

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 352

TRT#: 4

SEX: Male

DAY ON TEST: 589

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02561

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
		Vacuolization Cytoplasmic	Minimal
* Bone Marrow		Pigmentation	Mild
* Brain		Compression	Mild
		Hydrocephalus	Mild
	[Compression TGLS = 2-1]		
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-1]		
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Stomach, Forestomach		Ulcer	Mild
	[Ulcer TGLS = 3-4]		
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 353

TRT#: 4

SEX: Male

DAY ON TEST: 610

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02562

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Congestion	Mild
		Nephropathy	Chronic, Mild
* Liver		Congestion	Moderate
[Congestion TGLS = 3-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mandibular		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 354

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02563

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Brain		Compression	Mild
[Compression TGLS = 7-13]			
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Multiple, Mild
[Eosinophilic Focus TGLS = 5-5]			
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 4-10]			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Marked
	Interstit Cell	Hyperplasia	Minimal
[Adenoma TGLS = 2-9]			
[Atrophy TGLS = 3-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 355

TRT#: 4

DOSE: 150 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 721

HISTO: 88-02564

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Mild
* Brain		Compression	Mild
* Heart	Atrium	Thrombosis	Moderate
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 2-7]			
* Liver		Congestion	Mild
[Congestion TGLS = 8-5]		Fatty Change	Minimal
[Fatty Change TGLS = 8-5]			
* Lung	Alveolar Epith	Hyperplasia	Moderate
* Lymph Node, Mediastinal		Depletion Lymphoid	Moderate
		Hemorrhage	Mild
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Hematopoietic Cell Proliferation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 355

TRT#: 4

SEX: Male

DAY ON TEST: 721

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02564

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Adenoma	
		Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
[Adenoma TGLS = 3-9]			
[Atrophy TGLS = 4-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 356

TRT#: 4

SEX: Male

DAY ON TEST: 330

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02565

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Kidney
* Larynx	* Lymph Node, Mandibular	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Mild
[Compression TGLS = 14-17]			
* Liver		Fatty Change	Minimal
* Lung		Carcinoma	Metastatic (Zymbal'S Gland)
[Carcinoma TGLS = 9-6]			
Lymph Node	Renal	Hemorrhage	Mild
	Deep Cervical	Inflammation	Mild
[Hemorrhage TGLS = 10-14,11-8]			
[Inflammation TGLS = 2-13]			
* Lymph Node, Bronchial		Hemorrhage	Mild
[Hemorrhage TGLS = 10-14,11-8]			
* Lymph Node, Mediastinal		Carcinoma	Metastatic (Zymbal'S Gland)
[Carcinoma TGLS = 8-5]			
* Lymph Node, Mesenteric		Hemorrhage	Mild
[Hemorrhage TGLS = 10-14,11-8]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-15]			
* Nose	Nasolacrim Dct	Inflammation	Moderate
* Preputial Gland		Ectasia	Moderate
* Prostate		Concretion	Mild
* Salivary Glands		Abscess	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 356

TRT#: 4

SEX: Male

DAY ON TEST: 330

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02565

ORGAN AND ACCOUNTABLE SITE STATUS

[Abscess TGLS = 3-13]

* Seminal Vesicle

Depletion Cellular

Moderate

[Depletion Cellular TGLS = 5-10]

* Skin

Subcut Tiss

Abscess

Moderate

* Spleen

Hematopoietic Cell Proliferation

Mild

* Stomach, Forestomach

Hyperplasia

Mild

* Stomach, Glandular

Ulcer

Mild

* Testes

Hypospermia

Moderate

* Thymus

Atrophy

Marked

[Atrophy TGLS = 7-2]

Zymbal's Gland

Carcinoma

[Carcinoma TGLS = 1-16,19]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 357

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02566

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Moderate
[Basophilic Focus TGLS = 4-5]			
* Lung	Alveolar Epith	Hyperplasia	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Nose		Infiltration Cellular	Lymphocyte, Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Spleen		Degeneration	Cystic, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 358

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02567

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Trachea			

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Granuloma Sperm	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Lung		Inflammation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Mammary Gland		Galactocele	Moderate
		Lactation	Moderate
[Galactocele TGLS = 1-13]			
* Nose	Nasolacrim Dct	Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Minimal
* Prostate		Inflammation	Moderate
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder		Dilatation	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 359

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02568

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Cytoplasmic Alteration	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
[Basophilic Focus TGLS = 3-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Mild
		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 2-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 360

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02569

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Marked
* Brain		Compression	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Fatty Change	Marked
[Fatty Change TGLS = 7-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Minimal
* Mammary Gland		Lactation	Marked
[Lactation TGLS = 1-8]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Ectasia	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-10]			
* Spleen		Degeneration	Cystic, Moderate
		Hematopoietic Cell Proliferation	Mild
[Degeneration TGLS = 6-5]			
[Hematopoietic Cell Proliferation TGLS = 6-5]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 360	TRT#: 4	SEX: Male	DAY ON TEST: 729
	DOSE: 150 PPM	DISP: Terminal Sacrifice	HISTO: 88-02569

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 3,4-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 361

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02570

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Brain		Compression	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 3-7]			
* Liver		Basophilic Focus	Multiple, Minimal
		Fatty Change	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Nose	Respirat Epith	Hyperplasia	Minimal
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Prostate		Hyperplasia	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 362

TRT#: 4

SEX: Male

DAY ON TEST: 717

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02571

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Larynx	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Mild
	[Pheochromocytoma Benign TGLS = 1-3]		
* Bone Marrow		Hyperplasia	Mild
* Brain		Astrocytoma Malignant	
	[Astrocytoma Malignant TGLS = 8-1]		
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Necrosis	Moderate
	[Necrosis TGLS = 5-5]		
* Lung	Alveolar Epith	Hyperplasia Infiltration Cellular	Mild Histiocyte, Mild
* Lymph Node, Bronchial		Hemorrhage Infiltration Cellular	Moderate Histiocyte, Moderate
* Lymph Node, Mandibular		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Infiltration Cellular Pigmentation	Histiocyte, Mild Mild
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Nose		Angiectasis	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Ectasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 362

TRT#: 4

SEX: Male

DAY ON TEST: 717

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02571

ORGAN AND ACCOUNTABLE SITE STATUS

[Ectasia TGLS = 4-10]

* Seminal Vesicle

Depletion Cellular

Marked

* Spleen

Hematopoietic Cell Proliferation

Mild

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 6,7-9]

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 363

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02572

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 5-7]			
* Liver		Basophilic Focus	Multiple, Mild
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Bronchial		Hemorrhage	Marked
* Mammary Gland		Lactation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Infiltration Cellular	Lymphocyte, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
[Inflammation TGLS = 3-10]			
* Seminal Vesicle		Depletion Cellular	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 363	TRT#: 4	SEX: Male	DAY ON TEST: 729
	DOSE: 150 PPM	DISP: Terminal Sacrifice	HISTO: 88-02572

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Degeneration TGLS = 7-13]		Degeneration	Cystic, Moderate
* Testes [Adenoma TGLS = 1,2-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 364

TRT#: 4

SEX: Male

DAY ON TEST: 523

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02573

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Thymus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mesenteric
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OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
Note: TAN COLOR DUE TO AUTOLYSIS.			
* Liver		Congestion	Minimal
		Fatty Change	Minimal
[Congestion TGLS = 3-5]			
* Lung	Mediastinum	Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
		Alveolar/Bronchiolar Carcinoma	
		Inflammation	Mild
[Alveolar/Bronchiolar Carcinoma TGLS = 5-6,4-13]			
[Alveolar/Bronchiolar Carcinoma TGLS = 5-6,4-13]			
* Lymph Node, Bronchial		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Marked
		Pigmentation	Moderate
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Prostate		Concretion	Mild
* Testes	Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 364

TRT#: 4
DOSE: 150 PPM

SEX: Male
DISP: Natural Death

DAY ON TEST: 523
HISTO: 88-02573

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 6-9]	Interstit Cell	Hyperplasia	Minimal
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PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 365

TRT#: 4

DOSE: 150 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 667

HISTO: 88-02574

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Mammary Gland	* Nose	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
		Cardiomyopathy	Minimal
* Kidney		Cyst	Marked
		Nephropathy	Chronic, Mild
		Pigmentation	Mild
	[Cyst TGLS = 8-14]		
	[Nephropathy TGLS = 7-7,14]		
	[Pigmentation TGLS = 7-7,14]		
* Liver		Basophilic Focus	Minimal
* Lung		Alveolar/Bronchiolar Carcinoma	
	[Alveolar/Bronchiolar Carcinoma TGLS = 5-6]		
* Lymph Node, Bronchial		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 2,3,4-2]		
* Lymph Node, Mandibular		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 2,3,4-2]		
* Lymph Node, Mediastinal		Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 2,3,4-2]		
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 365

TRT#: 4

SEX: Male

DAY ON TEST: 667

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02574

ORGAN AND ACCOUNTABLE SITE STATUS

	Pars Distalis	Hyperplasia	Minimal
[Angiectasis TGLS = 9-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal
[Atrophy TGLS = 10-9]			
* Thymus		Atrophy	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 366

TRT#: 4

SEX: Male

DAY ON TEST: 699

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02575

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Thyroid Gland	* Trachea

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Spleen	* Stomach, Glandular
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Infiltration Cellular	Lymphocyte, Minimal
* Lung		Congestion	Mild
	Alveolar Epith	Hyperplasia	Mild
[Congestion TGLS = 2-6]			
[Hyperplasia TGLS = 2-6]			
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
* Seminal Vesicle		Ectasia	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 367

TRT#: 4

SEX: Male

DAY ON TEST: 611

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02576

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Heart		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-1]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Lactation	Minimal
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Stomach, Glandular		Ulcer	Moderate
[Ulcer TGLS = 4-4]			
* Testes	Bilateral	Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 367

TRT#: 4

SEX: Male

DAY ON TEST: 611

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02576

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 368

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02577

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	Mesentery
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Brain		Compression	Moderate
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	Multiple
		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Minimal
	[Alveolar/Bronchiolar Adenoma TGLS = 3-15,4-16]		
	[Alveolar/Bronchiolar Carcinoma TGLS = 2-13]		
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 5-1]		
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 6-9]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 368

TRT#: 4
DOSE: 150 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 730
HISTO: 88-02577

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland	C Cell	Hyperplasia	Minimal
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PRIMARY CAUSE OF DEATH	-		
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 369

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02578

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Mixed Cell Focus	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
			[Depletion Cellular TGLS = 3-10]
* Testes	Bilateral, Interstit Cell	Adenoma	
			[Adenoma TGLS = 1,2-9]
* Thymus		Thymoma Benign	
			[Thymoma Benign TGLS = 1,2-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 370

TRT#: 4

SEX: Male

DAY ON TEST: 728

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02579

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Mild
* Brain		Compression	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	Mild
	Epithelium	Hyperplasia	Mild
		Inflammation	Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Degeneration	Cystic, Mild
* Lung		Inflammation	Moderate
			[Inflammation TGLS = 4-6,5-14]
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Hyperplasia	Plasma Cell, Moderate
* Mammary Gland		Lactation	Mild
* Nose		Foreign Body	Moderate
		Inflammation	Marked
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
			[Adenoma TGLS = 3-1]
* Seminal Vesicle		Depletion Cellular	Marked
		Inflammation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 370	TRT#: 4	SEX: Male	DAY ON TEST: 728
	DOSE: 150 PPM	DISP: Natural Death	HISTO: 88-02579

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Hemangiosarcoma	
		Hematopoietic Cell Proliferation	Minimal
[Hemangiosarcoma TGLS = 2-13]			
* Testes	Bilateral	Atrophy	Moderate
	Arteriole	Inflammation	Moderate
* Thymus		Atrophy	Mild
* Thyroid Gland	Follicular Cel	Carcinoma	
[Carcinoma TGLS = 1-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 371

TRT#: 4

SEX: Male

DAY ON TEST: 582

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02580

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Compression	Minimal
[Compression TGLS = 9-1]			
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Intestine Small, Duodenum		Hyperplasia	Moderate
[Hyperplasia TGLS = 7-4]		Inflammation	Mild
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 2-7]			
* Liver		Fatty Change	Moderate
[Inflammation TGLS = 4-14]		Inflammation	Moderate
[Necrosis TGLS = 4-14]		Necrosis	Marked
* Lymph Node, Mediastinal		Hemorrhage	Minimal
[Hyperplasia TGLS = 1-5]		Hyperplasia	Plasma Cell, Moderate
* Mammary Gland		Lactation	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-13]			
* Nose		Inflammation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 371

TRT#: 4

SEX: Male

DAY ON TEST: 582

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02580

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 8-1]			
* Preputial Gland		Ectasia	Moderate
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
		Inflammation	Marked
		Necrosis	Moderate
[Inflammation TGLS = 10-15]			
[Necrosis TGLS = 10-15]			
* Stomach, Forestomach		Ulcer	Marked
[Ulcer TGLS = 5-4]			
* Stomach, Glandular		Inflammation	Mild
* Testes	Bilateral	Atrophy	Marked
[Atrophy TGLS = 6-9]			
* Thymus		Atrophy	Marked
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 372

TRT#: 4

DOSE: 150 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: 88-02581

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Compression	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 2-7]			
* Liver		Congestion	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
[Alveolar/Bronchiolar Adenoma TGLS = 4-14]			
[Hyperplasia TGLS = 3-14]			
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
		Hyperplasia	Lymphoid, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
* Prostate		Hyperplasia	Minimal
* Spleen		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 1-13]			
* Testes	Arteriole	Inflammation	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 372

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02581

ORGAN AND ACCOUNTABLE SITE STATUS

[Inflammation TGLS = 6-9]

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 373

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02582

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Compression	Minimal
[Compression TGLS = 7-1]			
* Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 4-7]			
* Liver		Fatty Change	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Mild
* Lymph Node, Mediastinal		Pigmentation	Mild
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 9-8]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-14]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 8-10]			
* Prostate		Concretion	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 373	TRT#: 4	SEX: Male	DAY ON TEST: 729
	DOSE: 150 PPM	DISP: Terminal Sacrifice	HISTO: 88-02582

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Inflammation	Moderate
* Skin	Tail	Depletion Cellular	Mild
	[Hyperkeratosis TGLS = 1-13]	Hyperkeratosis	Mild
* Spleen		Developmental Malformation	Minimal
	[Developmental Malformation TGLS = 3-5]	Hematopoietic Cell Proliferation	Minimal
* Testes	Bilateral	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
	Arteriole	Inflammation	Minimal
	[Atrophy TGLS = 10-9]		
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Moderate
	[Adenoma TGLS = 5-3]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 374

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02583

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Cyst	Mild
		Nephropathy	Chronic, Mild
[Cyst TGLS = 6-7]			
* Liver		Basophilic Focus	Multiple, Minimal
		Fatty Change	Mild
		Mixed Cell Focus	Mild
* Lung		Alveolar/Bronchiolar Adenoma	Multiple
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 5-1]			
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Minimal
[Depletion Cellular TGLS = 4-10]			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 374

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02583

ORGAN AND ACCOUNTABLE SITE STATUS

Interstit Cell

Hyperplasia

Mild

[Adenoma TGLS = 2-9]

[Atrophy TGLS = 3-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 375

TRT#: 4

SEX: Male

DAY ON TEST: 640

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02584

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
		Pigmentation	Mild
[Nephropathy TGLS = 6-7]			
[Pigmentation TGLS = 6-7]			
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Moderate
[Fatty Change TGLS = 7-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Galactocele	Moderate
		Inflammation	Mild
		Lactation	Moderate
[Galactocele TGLS = 5-13]			
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 375

TRT#: 4

SEX: Male

DAY ON TEST: 640

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02584

ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Stomach, Forestomach		Hyperplasia	Moderate
		Inflammation	Moderate
* Stomach, Glandular		Inflammation	Minimal
* Testes	Bilateral	Atrophy	Moderate
[Atrophy TGLS = 4-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 376

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02585

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
	[Angiectasis TGLS = 9-1]		
	[Hyperplasia TGLS = 8-1]		
* Preputial Gland		Ectasia	Moderate
		Hyperplasia	Moderate
	[Ectasia TGLS = 1-10]		
	[Hyperplasia TGLS = 1-10]		
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Mild
	[Depletion Cellular TGLS = 2-10]		
* Spleen		Degeneration	Cystic, Mild
	[Degeneration TGLS = 5,6-13]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 376

TRT#: 4
DOSE: 150 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 729
HISTO: 88-02585

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes
[Adenoma TGLS = 3,4-9]

Bilateral, Interstit Cell

Adenoma

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 377

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02586

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 1,2-9]			
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Multiple, Mild
* Lung	Alveolar Epith	Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 5-6]		Hyperplasia	Moderate
[Hyperplasia TGLS = 4,6,7-13]			
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Marked
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: THE CELLULAR MORPHOLOGY OF ONE OF THE INTERSTITIAL			
Note: CELL ADENOMAS IS QUITE ABNORMAL.			
[Adenoma TGLS = 1,2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 378

TRT#: 4

SEX: Male

DAY ON TEST: 647

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02587

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 1-1]			
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Congestion	Mild
		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Lactation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 4-10]			
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Inflammation	Moderate
[Inflammation TGLS = 5-10,13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6-9]			
* Thymus		Atrophy	Moderate
		Congestion	Moderate
		Hemorrhage	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 378

TRT#: 4

SEX: Male

DAY ON TEST: 647

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02587

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 379

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02588

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Compression	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Cyst	Marked
		Nephropathy	Chronic, Moderate
[Cyst TGLS = 1-17]			
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
		Alveolar/Bronchiolar Carcinoma	
		Inflammation	Mild
[Alveolar/Bronchiolar Adenoma TGLS = 4-6]			
[Alveolar/Bronchiolar Carcinoma TGLS = 2,3,4-6,13,14,15]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-18]			
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1,16]			
* Seminal Vesicle		Depletion Cellular	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 379

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02588

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral	Atrophy	Moderate
	Arteriole	Inflammation	Moderate
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 380

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02589

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Mammary Gland

OBSERVATIONS

* Brain		Compression	Moderate
		Hydrocephalus	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 1-13]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-14]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Nervosa	Craniopharyngioma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Interstit Cell	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 381

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02590

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
	[Pheochromocytoma Benign TGLS = 1-13]		
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Inflammation	Mild
* Liver		Clear Cell Focus	Multiple, Mild
		Eosinophilic Focus	Multiple, Minimal
		Fatty Change	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Moderate
	[Alveolar/Bronchiolar Adenoma TGLS = 5-14]		
	[Hyperplasia TGLS = 5-14]		
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Prostate		Vacuolization Cytoplasmic	Mild
* Seminal Vesicle		Depletion Cellular	Marked
	[Depletion Cellular TGLS = 4-10]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2,3-9]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 381

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02590

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 382

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02591

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Histiocytic Sarcoma	Metastatic (Skin)
* Lung		Alveolar/Bronchiolar Adenoma	Multiple
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 4,5,6-14,16,17]		
* Preputial Gland		Histiocytic Sarcoma	Metastatic (Skin)
* Skin	Subcut Tiss	Histiocytic Sarcoma	
	[Histiocytic Sarcoma TGLS = 1-13]		
* Spleen		Congestion	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2,3-9]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 383

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02592

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Moderate
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 384

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02593

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
Harderian Gland		Pigmentation	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
[Hemorrhage TGLS = 3-13]			
[Hyperplasia TGLS = 3-13]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-5]			
* Lymph Node, Mediastinal		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-5]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Adenoma	
		Ectasia	Mild
[Adenoma TGLS = 1-10]			
* Prostate		Inflammation	Minimal
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Testes	Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 385

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02594

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Goblet Cell	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Prostate		Concretion	Minimal
* Testes	Interstit Cell	Adenoma	Mild
	Interstit Cell	Hyperplasia	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Minimal
* Urinary Bladder		Infiltration Cellular	Lymphocyte, Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 386

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02595

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-6]			
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Foreign Body	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Minimal
* Prostate		Concretion	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 387

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
[Hemorrhage TGLS = 2-6]			
[Hyperplasia TGLS = 2-6]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 388

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02597

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 389

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02598

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Minimal
* Liver		Basophilic Focus	Minimal
		Congestion	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Mild
* Prostate		Concretion	Minimal
		Inflammation	Mild
* Testes	Interstitial Cell	Adenoma	
* Thymus		Atrophy	Minimal
		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 390

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02599

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Mild
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 391

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02600

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Minimal
	[Alveolar/Bronchiolar Adenoma TGLS = 4-14]		
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Ectasia	Moderate
* Prostate		Concretion	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Moderate
	[Adenoma TGLS = 2,3-9,13]		
	[Atrophy TGLS = 1-9,13]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 392

TRT#: 4

SEX: Male

DAY ON TEST: 456

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02601

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Intestine Small, Duodenum		Ectopic Tissue	Mild
Note: DUODENUM-PANCREAS IN T. MUSCULARIS AND MUCOSA.			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 57

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02266

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Pituitary Gland	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 58

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 88-02267

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Esophagus	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Mild
* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Moderate
[Leukemia Mononuclear TGLS = 7-4]			
[Thrombosis TGLS = 7-4]			
* Intestine Large, Cecum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 58

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 88-02267

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 4-8]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 4-8]		Leukemia Mononuclear	
* Ovary [Cyst TGLS = 1-9] [Leukemia Mononuclear TGLS = 1-9]		Cyst Leukemia Mononuclear	Moderate
* Pancreas [Leukemia Mononuclear TGLS = 3-8]		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 5-1] [Leukemia Mononuclear TGLS = 5-1]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 2-5,12,13]		Leukemia Mononuclear	
* Uterus [Leukemia Mononuclear TGLS = 8-9] [Polyp Stromal TGLS = 8-9]		Leukemia Mononuclear Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 59

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02268

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Minimal
		Vacuolization Cytoplasmic	Minimal
* Clitoral Gland		Ectasia	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Mammary Gland		Lactation	Mild
* Ovary		Cyst	Moderate
[Cyst TGLS = 3-9]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 60

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02269

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
		[Fibroadenoma TGLS = 1-12]	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 61

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02270

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 1-1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 62

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 652

HISTO: 88-02271

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mesenteric |
| * Nose | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Uterus | | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | | |
|---------------------------|-------------------------------------|----------------------|-----------------------|
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Compression | Moderate |
| | | Glioma Malignant | |
| | [Compression TGLS = 15-12] | | |
| | [Glioma Malignant TGLS = 15-12] | | |
| * Clitoral Gland | | Ectasia | Mild |
| * Heart | | Cardiomyopathy | Minimal |
| | | Leukemia Mononuclear | |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Fatty Change | Marked |
| | | Leukemia Mononuclear | |
| | [Fatty Change TGLS = 5-5] | | |
| | [Leukemia Mononuclear TGLS = 5-5] | | |
| * Lung | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 5-5] | | |
| * Lymph Node, Mandibular | | Hyperplasia | Plasma Cell, Moderate |
| * Lymph Node, Mediastinal | | Hemorrhage | Minimal |
| | | Pigmentation | Mild |
| * Mammary Gland | | Lactation | Minimal |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| | [Adenoma TGLS = 14-1] | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 62

TRT#: 5

SEX: Female

DAY ON TEST: 652

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02271

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 4-5]	Leukemia Mononuclear	
* Stomach, Forestomach	Hyperplasia	Mild
* Thymus	Atrophy	Marked
* Urinary Bladder	Dilatation	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 63

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 668

HISTO: 88-02272

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex	Leukemia Mononuclear	
* Adrenal Medulla	Leukemia Mononuclear	
* Bone Marrow	Leukemia Mononuclear	
* Clitoral Gland	Ectasia	Moderate
* Heart	Cardiomyopathy	Minimal
* Kidney	Leukemia Mononuclear	
	Leukemia Mononuclear	
	Nephropathy	Chronic, Mild
* Liver	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]		
* Lung	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-6,12]		
* Lymph Node, Mediastinal	Hemorrhage	Mild
	Leukemia Mononuclear	
* Nose	Leukemia Mononuclear	
* Pancreas	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-6,12]		
* Pituitary Gland	Cyst	Mild
	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-1]		
* Spleen	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]		
* Stomach, Forestomach	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 63	TRT#: 5 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 668 HISTO: 88-02272
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 5-4] [Ulcer TGLS = 5-4] * Stomach, Glandular	Ulcer	Moderate
[Leukemia Mononuclear TGLS = 5-4] [Ulcer TGLS = 5-4] * Thymus	Leukemia Mononuclear Ulcer	Multiple, Moderate
	Atrophy Leukemia Mononuclear	Marked

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 64

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02273

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
		Hyperplasia	Mild
* Intestine Small, Ileum		Inflammation	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Leukemia Mononuclear	
		Necrosis	Mild
		[Leukemia Mononuclear TGLS = 2-5]	
* Lung		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 2-5]	
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose		Foreign Body	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-5,12]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 64

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02273

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 65

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02274

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal
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OBSERVATIONS

* Brain		Compression	Mild
		Hydrocephalus	Moderate
* Heart		Cardiomyopathy	Minimal
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 3-7]			
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Mild
		Inflammation	Minimal
[Basophilic Focus TGLS = 2-5]			
[Fatty Change TGLS = 2-5]			
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 1-8]			
* Nose	Respirat Epith	Hyperplasia	Mild
	Nasolacrim Dct	Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 65

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02274

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 66

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02275

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Complex	
* Brain		Compression	Minimal
[Compression TGLS = 3-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Mild
[Basophilic Focus TGLS = 1-5]			
* Lung		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 67

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02276

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Developmental Malformation	Mild
		Fatty Change	Mild
* Lung		Inflammation	Minimal
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12,14]			
* Nose	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[Adenoma TGLS = 3-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 68

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02277

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Minimal
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 2-5]			
[Leukemia Mononuclear TGLS = 2-5]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose		Foreign Body	Minimal
	Respirat Epith	Hyperplasia	Minimal
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 3-1]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 68	TRT#: 5 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 88-02277
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 4-5]

* Thymus	Atrophy	Moderate
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PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 69

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 602

HISTO: 88-02278

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Cyst	Moderate
* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Complex	
* Bone Marrow		Hyperplasia	Marked
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 1-12]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
[Nephropathy TGLS = 3-7]			
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
[Adenoma TGLS = 6-1]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 2-5]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 70

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 516

HISTO: 88-02279

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum * Intestine Small, Jejunum

OBSERVATIONS

Islets, Pancreatic		Adenoma	
* Kidney		Mineralization	Minimal
* Larynx		Inflammation	Moderate
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Minimal
	Pars Distalis	Cyst	Mild
* Spleen		Pigmentation	Moderate
[Pigmentation TGLS = 1-5]			
* Thymus		Atrophy	Marked
Tongue		Squamous Cell Carcinoma	
[Squamous Cell Carcinoma TGLS = 6-12]			
* Uterus		Sarcoma Stromal	
[Sarcoma Stromal TGLS = 4-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 71

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 641

HISTO: 88-02280

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Mild
[Compression TGLS = 3-1]			
* Heart		Cardiomyopathy	Minimal
Islets, Pancreatic		Adenoma	
[Adenoma TGLS = 4-2]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Adenocarcinoma	
		Lactation	Mild
[Adenocarcinoma TGLS = 2-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 72

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 658

HISTO: 88-02281

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|----------------------------|--------------------------|
| * Bone | * Brain | * Esophagus | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Jejunum | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Thyroid Gland |
| * Trachea | | | |

OBSERVATIONS

- | | | |
|---------------------------------------|----------------------|----------|
| * Adrenal Cortex | Leukemia Mononuclear | |
| * Adrenal Medulla | Leukemia Mononuclear | |
| * Bone Marrow | Leukemia Mononuclear | |
| * Clitoral Gland | Ectasia | Moderate |
| * Heart | Leukemia Mononuclear | |
| * Intestine Large, Cecum | Leukemia Mononuclear | |
| | Inflammation | Marked |
| | Necrosis | Marked |
| * Intestine Small, Ileum | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-8] | | |
| * Kidney | Infarct | Moderate |
| | Leukemia Mononuclear | |
| [Infarct TGLS = 3-13] | | |
| [Leukemia Mononuclear TGLS = 3-13] | | |
| * Larynx | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 7,9-9] | | |
| * Liver | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-5] | | |
| * Lung | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-5] | | |
| * Lymph Node, Mandibular | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-8] | | |
| * Lymph Node, Mediastinal | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-8] | | |
| * Lymph Node, Mesenteric | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 72

TRT#: 5

SEX: Female

DAY ON TEST: 658

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02281

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 6-8]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7,9-9]			
* Ovary	Corpus Luteum	Hyperplasia	Moderate
[Hyperplasia TGLS = 5-9]			
* Pituitary Gland		Cyst	Mild
		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Ulcer	Moderate
[Ulcer TGLS = 8-4]			
* Thymus		Atrophy	Moderate
* Urinary Bladder		Leukemia Mononuclear	
* Uterus	Bilateral	Polyp Stromal	
[Polyp Stromal TGLS = 7,9-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 73

TRT#: 5
DOSE: CONTROL

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: 88-02282

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Brain		Compression	Mild
[Compression TGLS = 4-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Adenocarcinoma	
[Adenocarcinoma TGLS = 1-12]		Lactation	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Skin	Subcut Tiss	Fibrosarcoma	
[Fibrosarcoma TGLS = 5-14]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 74

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02283

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Leukemia Mononuclear	
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Lactation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Moderate
	[Angiectasis TGLS = 1-1]		
	[Cyst TGLS = 1-1]		
	[Hyperplasia TGLS = 1-1]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-1]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 75

TRT#: 5

SEX: Female

DAY ON TEST: 646

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02284

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Brain		Compression	Moderate
		Thrombosis	Moderate
[Compression TGLS = 4-1]			
* Clitoral Gland		Ectasia	Moderate
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Moderate
* Lymph Node, Mediastinal		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Moderate
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 76

TRT#: 5

SEX: Female

DAY ON TEST: 671

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02285

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Moderate
		Leukemia Mononuclear	
[Compression TGLS = 8-1]			
[Leukemia Mononuclear TGLS = 8-1]			
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 3-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 7-1]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 76	TRT#: 5 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 671 HISTO: 88-02285
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-5]		
* Stomach, Forestomach	Hyperplasia	Mild
	Ulcer	Minimal
* Thymus	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 77

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02286

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-12]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 78

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02287

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Kidney | * Larynx |
| * Lung | * Lymph Node, Mandibular | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | | |
|---------------------------------|---------------|----------------------------------|----------------------|
| * Bone Marrow | | Hyperplasia | Marked |
| * Brain | | Hydrocephalus | Minimal |
| * Clitoral Gland | | Ectasia | Mild |
| * Heart | | Cardiomyopathy | Minimal |
| * Liver | | Basophilic Focus | Multiple, Mild |
| | | Hematopoietic Cell Proliferation | Minimal |
| | | Necrosis | Mild |
| * Lymph Node, Mediastinal | | Hemorrhage | Moderate |
| | | Infiltration Cellular | Histiocyte, Moderate |
| | | Pigmentation | Mild |
| * Lymph Node, Mesenteric | | Hemorrhage | Moderate |
| * Mammary Gland | | Fibroadenoma | |
| | | Lactation | Mild |
| [Fibroadenoma TGLS = 1-12,13] | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-1] | | | |
| * Spleen | | Hematopoietic Cell Proliferation | Mild |
| * Thymus | | Atrophy | Moderate |
| * Thyroid Gland | C Cell | Hyperplasia | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 78

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02287

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 79

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02288

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
[Adenoma TGLS = 3-12]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Uterus	Bilateral	Dilatation	Mild
[Dilatation TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 80

TRT#: 5

SEX: Female

DAY ON TEST: 702

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02289

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
* Heart		Leukemia Mononuclear	
* Kidney	Atrium	Thrombosis	Mild
		Nephropathy	Chronic, Minimal
		Pigmentation	Minimal
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 2-5]	
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Bronchial		Pigmentation	Mild
* Lymph Node, Mediastinal		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland		Cyst	Moderate
		[Cyst TGLS = 3-1]	
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-5]	
* Stomach, Forestomach		Ulcer	Multiple, Mild
* Stomach, Glandular		Ulcer	Mild
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:15
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 80

TRT#: 5
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 702
HISTO: 88-02289

ORGAN AND ACCOUNTABLE SITE STATUS

Pigmentation

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 81

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02290

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 2-1]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 82

TRT#: 5

SEX: Female

DAY ON TEST: 604

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02291

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Bone Marrow | * Clitoral Gland | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lung |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Adrenal Medulla

OBSERVATIONS

- | | | | |
|---------------------------|---------------|----------------|------------------------------|
| * Adrenal Cortex | | Hyperplasia | Mild |
| * Brain | | Carcinoma | Metastatic (Pituitary Gland) |
| [Carcinoma TGLS = 3-1] | | | |
| * Heart | | Cardiomyopathy | Minimal |
| * Kidney | | Mineralization | Minimal |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Fatty Change | Mild |
| * Lymph Node, Mediastinal | | Hemorrhage | Mild |
| | | Pigmentation | Mild |
| * Pituitary Gland | Pars Distalis | Carcinoma | |
| [Carcinoma TGLS = 2-1] | | | |
| * Thymus | | Atrophy | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 83

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02292

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Moderate
		Inflammation	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Edema	Moderate
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 2-12]			
* Nose		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 1-1]			
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 84

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02293

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Clitoral Gland		Ectasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Minimal
		[Angiectasis TGLS = 1-1]	
		[Hyperplasia TGLS = 1-1]	
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 85

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 526

HISTO: 88-02294

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|-----------------------------|-------------------|--------------------------|
| * Bone | * Brain | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Small, Duodenum | * Larynx | * Mammary Gland |
| * Nose | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

AUTO PRECLUDES DIAG.

- | | | |
|---------------------------|--------------------------|----------------------------|
| * Intestine Large, Rectum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|---------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | | |
|--|----------------------|------------------|
| * Adrenal Cortex
[Leukemia Mononuclear TGLS = 1-5] | Leukemia Mononuclear | |
| * Adrenal Medulla
[Leukemia Mononuclear TGLS = 1-5] | Leukemia Mononuclear | |
| * Bone Marrow | Leukemia Mononuclear | |
| * Clitoral Gland | Ectasia | Minimal |
| * Heart | Cardiomyopathy | Minimal |
| * Kidney | Leukemia Mononuclear | |
| | Leukemia Mononuclear | |
| | Nephropathy | Chronic, Minimal |
| * Liver
[Leukemia Mononuclear TGLS = 4-5] | Leukemia Mononuclear | |
| * Lung
[Leukemia Mononuclear TGLS = 4-5] | Leukemia Mononuclear | |
| * Lymph Node, Bronchial
[Leukemia Mononuclear TGLS = 1-5] | Leukemia Mononuclear | |
| * Lymph Node, Mandibular
[Leukemia Mononuclear TGLS = 1-5] | Leukemia Mononuclear | |
| * Lymph Node, Mediastinal
[Leukemia Mononuclear TGLS = 1-5] | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric
[Leukemia Mononuclear TGLS = 1-5] | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 85

TRT#: 5

SEX: Female

DAY ON TEST: 526

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02294

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary [Leukemia Mononuclear TGLS = 4-5]		Leukemia Mononuclear
* Pancreas [Leukemia Mononuclear TGLS = 5-1]		Leukemia Mononuclear
* Pituitary Gland [Adenoma TGLS = 5-1]	Pars Distalis	Adenoma
* Spleen [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear
* Thymus [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 86

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 721

HISTO: 88-02295

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Brain		Compression	Mild
		Hemorrhage	Mild
	[Compression TGLS = 3-1]		
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Congestion	Minimal
	[Hepatodiaphragmatic Nodule TGLS = 1-12]	Hepatodiaphragmatic Nodule	
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-1]		
* Thyroid Gland	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:15

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 87

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02296

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 6-1]			
* Clitoral Gland		Ectasia	Minimal
[Ectasia TGLS = 1-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney	Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Minimal
		Mixed Cell Focus	Mild
[Mixed Cell Focus TGLS = 4-14]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2,3-12,13]			
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 5-1]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 88

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02297

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Minimal
Lymph Node	Lumbar	Cyst	Mild
	Lumbar	Hyperplasia	Lymphoid, Mild
	Lumbar	Pigmentation	Mild
[Cyst TGLS = 2-12]			
[Hyperplasia TGLS = 2-12]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Marked
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Pancreas		Accessory Spleen	
	Acinar Cell	Atrophy	Minimal
[Accessory Spleen TGLS = 1-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Minimal
[Adenoma TGLS = 3-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 89

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02298

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Minimal
[Compression TGLS = 5-1]			
* Clitoral Gland		Ectasia	Mild
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Pigmentation	Minimal
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 1-14]			
* Nose		Inflammation	Mild
* Ovary		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-14]			
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 89	TRT#: 5 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 88-02298
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ORGAN AND ACCOUNTABLE SITE STATUS

[Angiectasis TGLS = 4-1]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,12,13]			
* Thymus		Atrophy	Mild
* Uterus		Dilatation	Moderate
[Dilatation TGLS = 6-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 90

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02299

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland [Ectasia TGLS = 3-9]		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver [Mixed Cell Focus TGLS = 4-14]		Basophilic Focus Clear Cell Focus Mixed Cell Focus	Multiple, Mild Minimal
* Lymph Node, Mediastinal		Hemorrhage Pigmentation Fibroadenoma	Minimal Mild
* Mammary Gland [Fibroadenoma TGLS = 1-12]		Atrophy	Minimal
* Pancreas * Pituitary Gland [Adenoma TGLS = 5-1]	Acinar Cell Pars Distalis	Adenoma	
* Skin [Squamous Cell Papilloma TGLS = 6-13]	Tail	Squamous Cell Papilloma	
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 91

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02300

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mandibular
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OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 2-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 92

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02301

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-12]			
* Nose		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Thymus		Atrophy	Mild
* Uterus	Bilateral	Dilatation	Moderate
[Dilatation TGLS = 4-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 93

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02302

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Necrosis	Minimal
* Lung		Inflammation	Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 2-1]			
* Skin	Tail	Hyperkeratosis	Moderate
	Tail	Parakeratosis	Mild
[Hyperkeratosis TGLS = 3-13]			
[Parakeratosis TGLS = 3-13]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 94

TRT#: 5

SEX: Female

DAY ON TEST: 640

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02303

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Clitoral Gland	* Intestine Large, Rectum
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OBSERVATIONS

* Adrenal Cortex		Necrosis	Moderate
* Bone Marrow		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
		Pigmentation	Moderate
* Liver		Fatty Change	Moderate
[Fatty Change TGLS = 2-5]			
* Lung		Inflammation	Moderate
* Lymph Node, Mediastinal		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 1-5]			
* Stomach, Glandular		Inflammation	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 95

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02304

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 96

TRT#: 5

SEX: Female

DAY ON TEST: 640

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02305

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain		Compression	Mild
		Hemorrhage	Minimal
		Hydrocephalus	Mild
[Compression TGLS = 2-1]			
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Developmental Malformation	Mild
[Developmental Malformation TGLS = 3-12]			
* Lung		Hemorrhage	Mild
* Lymph Node, Mediastinal		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Ovary		Cyst	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 97

TRT#: 5

SEX: Female

DAY ON TEST: 666

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02306

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mesenteric	* Ovary	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Clitoral Gland	* Parathyroid Gland
------------------	---------------------

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Kidney		Cyst	Moderate
		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
[Cyst TGLS = 6-7]			
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
		Lactation	Moderate
[Fibroadenoma TGLS = 1,2-12,13]			
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 97

TRT#: 5

SEX: Female

DAY ON TEST: 666

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02306

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 98

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02307

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 1-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 99

TRT#: 5

SEX: Female

DAY ON TEST: 464

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 88-02308

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Moderate
* Liver		Fatty Change	Mild
[Fatty Change TGLS = 6,7-14,4-5,5-13]		Inflammation	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Ulcer	Multiple, Moderate
[Ulcer TGLS = 1-4,12]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 100

TRT#: 5

SEX: Female

DAY ON TEST: 720

DOSE: CONTROL

DISP: Natural Death

HISTO: 88-02309

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Brain | * Clitoral Gland | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Nose |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | |
|--|----------------------|-----------------------|
| * Adrenal Cortex | Leukemia Mononuclear | |
| * Adrenal Medulla | Hyperplasia | Mild |
| | Leukemia Mononuclear | |
| * Bone Marrow | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-4,12] | | |
| * Heart | Cardiomyopathy | Mild |
| | Leukemia Mononuclear | |
| * Kidney | Leukemia Mononuclear | |
| | Nephropathy | Chronic, Minimal |
| | Pigmentation | Minimal |
| * Liver | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5] | | |
| * Lung | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5] | | |
| * Lymph Node, Mandibular | Hyperplasia | Plasma Cell, Moderate |
| * Lymph Node, Mediastinal | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | Leukemia Mononuclear | |
| * Mammary Gland | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5] | | |
| * Ovary | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5] | | |
| * Pancreas | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 100	TRT#: 5	SEX: Female	DAY ON TEST: 720
	DOSE: CONTROL	DISP: Natural Death	HISTO: 88-02309

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-5]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-12]			
* Stomach, Forestomach		Leukemia Mononuclear	
		Ulcer	Mild
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Atrophy	Marked
		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 101

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02310

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Adenocarcinoma	
		Fibroadenoma	
	[Adenocarcinoma TGLS = 1-13]		
	[Fibroadenoma TGLS = 2-12]		
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 102

TRT#: 5

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 88-02311

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Mammary Gland		Lactation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Nasolacrim Dct	Inflammation	Minimal
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
		[Angiectasis TGLS = 1-1]	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 103

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Scheduled Sacrifice

DAY ON TEST: 457

HISTO: 88-02312

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular |
| * Mammary Gland | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|-------------------------------------|---------------|----------------------|---------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Clitoral Gland | | Ectasia | Mild |
| * Kidney | | Mineralization | Minimal |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-5] | | | |
| * Lung | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-5] | | | |
| * Lymph Node, Bronchial | | Pigmentation | Mild |
| * Lymph Node, Mediastinal | | Hemorrhage | Minimal |
| | | Leukemia Mononuclear | |
| | | Pigmentation | Mild |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| * Pituitary Gland | Pars Distalis | Cyst | Mild |
| * Spleen | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5] | | | |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 104

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02313

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
		Inflammation	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Hematopoietic Cell Proliferation	Minimal
* Lung		Hemorrhage	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Nose	Globet Cell	Hyperplasia	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 105

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02314

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
	[Angiectasis TGLS = 2-1]		
* Thymus		Atrophy	Mild
* Uterus		Hemorrhage	Marked
	[Hemorrhage TGLS = 3-12]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 106

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02315

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Skin	Subcut Tiss	Lipoma	
	[Lipoma TGLS = 1-12,13]		
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 107

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02316

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 108

TRT#: 5

DOSE: CONTROL

SEX: Female

DISP: Scheduled Sacrifice

DAY ON TEST: 457

HISTO: 88-02317

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Hematopoietic Cell Proliferation	Minimal
		Inflammation	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
[Hemorrhage TGLS = 1-5]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 1-5]			
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 109

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02318

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Bone Marrow |
| * Brain | * Esophagus | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Ovary | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|---------------------------|-------------|----------------------------------|------------------|
| * Clitoral Gland | | Ectasia | Mild |
| * Heart | | Cardiomyopathy | Minimal |
| * Kidney | | Mineralization | Minimal |
| | | Nephropathy | Chronic, Minimal |
| * Liver | | Hematopoietic Cell Proliferation | Minimal |
| * Lung | | Hemorrhage | Mild |
| * Lymph Node, Bronchial | | Hemorrhage | Minimal |
| * Lymph Node, Mediastinal | | Hemorrhage | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 110

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02319

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Angiectasis	Mild
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 1-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 111

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02320

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 112

TRT#: 5

SEX: Female

DAY ON TEST: 457

DOSE: CONTROL

DISP: Scheduled Sacrifice

HISTO: 88-02321

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Inflammation	Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 169

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02378

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Clitoral Gland		Abscess	Moderate
		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 1-1]			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Carcinoma	
[Adenoma TGLS = 2-3]			
[Carcinoma TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 170

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02379

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-1]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 171

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02380

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Kidney	* Larynx	* Lung
* Lymph Node, Mandibular	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone	Femur	Hyperostosis	Moderate
	Turbinate	Hyperostosis	Moderate
* Liver		Basophilic Focus	Multiple, Mild
	[Basophilic Focus TGLS = 5-5,14]		
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 1,3,2-12,13,15]		
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Uterus		Dilatation	Mild
	[Dilatation TGLS = 4-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 172

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02381

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Kidney	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Moderate
	Pars Nervosa	Developmental Malformation	Mild
[Cyst TGLS = 1-1]			
* Uterus		Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 173

TRT#: 6

SEX: Female

DAY ON TEST: 659

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02382

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|----------------------------|--------------------------|---------------------------|
| * Bone | * Esophagus | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Bronchial |
| * Mammary Gland | * Nose | * Pancreas | * Salivary Glands |
| * Skin | * Stomach, Glandular | * Thyroid Gland | * Trachea |

MISSING

- * Parathyroid Gland

AUTO PRECLUDES DIAG.

- * Intestine Small, Ileum

OBSERVATIONS

- | | | | |
|--------------------------------------|------|----------------------|---------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-9] | | | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-9] | | | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 9-1] | | | |
| * Clitoral Gland | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 9-1] | | | |
| Eye | Lens | Cataract | Moderate |
| | | Hemorrhage | Mild |
| [Hemorrhage TGLS = 8-14] | | | |
| * Heart | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 8-14] | | | |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-9] | | | |
| * Kidney | | Hypoplasia | Moderate |
| | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| [Hypoplasia TGLS = 7-7] | | | |
| [Leukemia Mononuclear TGLS = 2-7] | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 173

TRT#: 6

SEX: Female

DAY ON TEST: 659

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02382

ORGAN AND ACCOUNTABLE SITE STATUS

[Nephropathy TGLS = 2-7]		
* Liver	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]		
* Lung	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]		
* Lymph Node, Mandibular	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-9]		
* Lymph Node, Mediastinal	Leukemia Mononuclear	
* Lymph Node, Mesenteric	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-9]		
* Ovary	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]		
* Pituitary Gland	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]		
* Spleen	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]		
* Stomach, Forestomach	Inflammation	Minimal
* Thymus	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]		
* Urinary Bladder	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]		
* Uterus	Leukemia Mononuclear	
	Polyp Stromal	
[Leukemia Mononuclear TGLS = 6-9]		
[Polyp Stromal TGLS = 6-9]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 174

TRT#: 6

SEX: Female

DAY ON TEST: 720

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02383

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum
--------------------------	--------------------------

OBSERVATIONS

* Adrenal Medulla	Bilateral	Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 5,6-3,12]			
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
* Lung		Congestion	Moderate
		Hemorrhage	Moderate
[Congestion TGLS = 3-6]			
[Hemorrhage TGLS = 3-6]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-14]			
* Pancreas	Acinar Cell	Atrophy	Marked
* Skin	Tail	Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 1-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 174

TRT#: 6

SEX: Female

DAY ON TEST: 720

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02383

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 175

TRT#: 6

SEX: Female

DAY ON TEST: 648

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02384

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|----------------------|--------------------------|
| * Adrenal Medulla | * Bone Marrow | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Larynx | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Ovary | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Clitoral Gland

AUTO PRECLUDES DIAG.

- | | | |
|-----------------------------|--------------------------|----------------------------|
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|-----------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|---|---------------|------------------------------|---------------------|
| * Adrenal Cortex | | Adenoma | |
| * Bone | Femur | Hyperostosis | Moderate |
| * Brain | | Compression | Mild |
| [Compression TGLS = 2-1] | | | |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Multiple, Mild |
| * Lung | | Alveolar/Bronchiolar Adenoma | |
| | | Congestion | Moderate |
| | | Hemorrhage | Minimal |
| | | Infiltration Cellular | Histiocyte, Minimal |
| * Lymph Node, Mediastinal | | Hemorrhage | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 1-1] | | | |
| * Thymus | | Atrophy | Mild |
| Tissue NOS | | Developmental Malformation | |
| Note: MACROPHAGES. THE LOCATION IS UNKNOWN. | | | |
| Note: SMALL FOCI OF HEPATOCYTES AND PIGMENT-LADEN | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 175

TRT#: 6

SEX: Female

DAY ON TEST: 648

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02384

ORGAN AND ACCOUNTABLE SITE STATUS

Note: THE PIECE OF FAT HAS WITHIN IT SEVERAL

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 176

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02385

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial	* Thymus
-------------------------	----------

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Hyperplasia	Mild
		Inflammation	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Mild
	[Hepatodiaphragmatic Nodule TGLS = 1-5]		
* Lung		Inflammation	Moderate
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
* Nose	Nasolacrim Dct	Inflammation	Marked
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
	[Angiectasis TGLS = 2-1]		
* Salivary Glands		Inflammation	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 177

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02386

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Mammary Gland		Lactation	Mild
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
	[Angiectasis TGLS = 1-1]		
	[Cyst TGLS = 1-1]		
	[Hyperplasia TGLS = 1-1]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 178

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02387

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Minimal
[Adenoma TGLS = 1-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 179

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02388

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Nose	Nasolacrim Dct	Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 180

TRT#: 6

SEX: Female

DAY ON TEST: 378

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02389

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Mineralization	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
Lymph Node	Axillary	Hyperplasia	Plasma Cell, Mild
	Axillary	Hyperplasia	Lymphoid, Moderate
[Hyperplasia TGLS = 1-12,13,1-12,13]			
[Hyperplasia TGLS = 1-12,13,1-12,13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 2-12+13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 181

TRT#: 6

SEX: Female

DAY ON TEST: 645

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02390

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
-------------------------	---------------------

OBSERVATIONS

* Adrenal Cortex	Angiectasis	Mild
* Adrenal Medulla	Pheochromocytoma Benign	
* Bone Marrow	Hyperplasia	Moderate
* Clitoral Gland	Ectasia	Mild
* Kidney	Mineralization	Minimal
* Lung	Alveolar/Bronchiolar Carcinoma	
	Hemorrhage	Mild
[Alveolar/Bronchiolar Carcinoma TGLS = 4-13]		
* Mammary Gland	Fibroadenoma	
[Fibroadenoma TGLS = 3-12]		
* Pancreas	Acinar Cell	Atrophy
		Minimal
* Spleen		Hematopoietic Cell Proliferation
		Mild
* Thymus		Atrophy
		Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 182

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02391

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Brain		Compression	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Hyperplasia	Moderate
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 183

TRT#: 6

SEX: Female

DAY ON TEST: 477

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02392

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

AUTO PRECLUDES DIAG.

* Intestine Large, Colon	* Intestine Small, Duodenum	* Stomach, Glandular
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OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Congestion	Mild
		Mineralization	Minimal
* Lung		Congestion	Mild
		Hemorrhage	Minimal
		[Congestion TGLS = 1-12]	
		[Hemorrhage TGLS = 1-12]	
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 184

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02393

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 2-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 3-1]			
[Hyperplasia TGLS = 3-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 185

TRT#: 6

SEX: Female

DAY ON TEST: 672

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02394

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Kidney
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Ectasia	Moderate
* Liver		Basophilic Focus	Multiple, Moderate
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 186

TRT#: 6

DOSE: 37.5 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 88-02395

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Mammary Gland		Hemorrhage	Mild
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 187

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02396

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Kidney	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Pituitary Gland	* Thymus
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OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Thyroid Gland	Bilateral, C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 188

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02397

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone	Femur	Hyperostosis	Moderate
* Bone Marrow		Myelofibrosis	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Angiectasis	Mild
		Basophilic Focus	Multiple, Mild
		Fatty Change	Mild
		Histiocytic Sarcoma	
		Hemorrhage	Moderate
		Hemorrhage	Mild
		Pigmentation	Mild
		Fibroadenoma	
		Atrophy	Moderate
		Cyst	Mild
		Hyperplasia	Moderate
		Hematopoietic Cell Proliferation	Mild
		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 190

TRT#: 6

DOSE: 37.5 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 624

HISTO: 88-02399

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Brain	Compression	Moderate
[Compression TGLS = 4-1]		
* Heart	Cardiomyopathy	Minimal
* Kidney	Nephropathy	Chronic, Mild
* Liver	Basophilic Focus	Minimal
	Fatty Change	Minimal
* Lung	Congestion	Mild
	Hemorrhage	Minimal
[Congestion TGLS = 1-6]		
[Hemorrhage TGLS = 1-6]		
* Lymph Node, Mediastinal	Hemorrhage	Mild
* Mammary Gland	Lactation	Mild
* Pituitary Gland	Adenoma	
[Adenoma TGLS = 3-1]		
* Spleen	Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 191

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02400

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Nose	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Inflammation	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 192

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02401

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen

Hematopoietic Cell Proliferation

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 193

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02402

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
[Hemorrhage TGLS = 1-5]			
[Pigmentation TGLS = 1-5]			
* Mammary Gland		Adenoma	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 194

TRT#: 6

SEX: Female

DAY ON TEST: 686

DOSE: 37.5 PPM

DISP: Moribund Sacrifice

HISTO: 88-02403

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Brain		Compression	Mild
[Compression TGLS = 2-1]			
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Mild
		Fatty Change	Mild
* Liver			
[Fatty Change TGLS = 4-5]			
* Ovary		Cyst	Mild
		Granulosa Cell Tumor Benign	
[Cyst TGLS = 3-9]			
[Granulosa Cell Tumor Benign TGLS = 3-9,9.1]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 195

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02404

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone	Femur	Hyperostosis	Mild
* Clitoral Gland		Inflammation	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Nose		Hemorrhage	Mild
	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Moderate

[Angiectasis TGLS = 1-1]

[Cyst TGLS = 1-1]

[Hyperplasia TGLS = 1-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 196

TRT#: 6

DOSE: 37.5 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 88-02405

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone	Femur	Hyperostosis	Marked
	Turbinates	Hyperostosis	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Ovary		Cyst	Moderate
[Cyst TGLS = 1-9]			
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Minimal
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 197

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02406

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	Mild
[Hepatodiaphragmatic Nodule TGLS = 1-5]			
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Minimal
	Pars Distalis	Cyst	Moderate
[Angiectasis TGLS = 2-1]			
[Cyst TGLS = 2-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 198

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02407

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Hemorrhage	Mild
* Lymph Node, Mandibular		Cyst	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 199

TRT#: 6

DOSE: 37.5 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 88-02408

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Mammary Gland		Adenocarcinoma	
		Fibroadenoma	Multiple
		Lactation	Moderate
[Adenocarcinoma TGLS = 2-13]			
[Fibroadenoma TGLS = 1,3-12,15]			
* Nose		Angiectasis	Mild
		Foreign Body	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 199

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02408

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-1]

* Thymus

Atrophy

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 200

TRT#: 6

DOSE: 37.5 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 88-02409

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Minimal
		Vacuolization Cytoplasmic	Moderate
* Brain		Compression	Mild
[Compression TGLS = 2-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Mild
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 201

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02410

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Inflammation	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 202

TRT#: 6

DOSE: 37.5 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 88-02411

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

MISSING

* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Cytoplasmic Alteration	Minimal
* Clitoral Gland		Ectasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Moderate
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12,13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Cyst TGLS = 4-1]			
[Hyperplasia TGLS = 4-1]			
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 202

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02411

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 203

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02412

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
		Hypertrophy	Minimal
* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 1-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 204

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02413

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Moderate
[Basophilic Focus TGLS = 1-5]			
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 4-12]			
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 3-1]			
[Hyperplasia TGLS = 2-1]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 205

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02414

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Bone Marrow |
| * Esophagus | * Heart | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Lymph Node, Mesenteric | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|---|---------------|-------------------------|-----------------------|
| * Brain | | Compression | Minimal |
| [Compression TGLS = 3-1] | | | |
| * Clitoral Gland | | Ectasia | Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Mild |
| | | Eosinophilic Focus | Minimal |
| * Lung | | Inflammation | Minimal |
| * Lymph Node, Bronchial | | Pigmentation | Minimal |
| * Lymph Node, Mandibular | | Hyperplasia | Plasma Cell, Moderate |
| * Lymph Node, Mediastinal | | Pigmentation | Minimal |
| * Mammary Gland | | Abscess | Mild |
| | | Lactation | Mild |
| * Nose | | Inflammation | Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-1] | | | |
| * Thymus | | Atrophy | Minimal |
| Tongue | | Squamous Cell Papilloma | |
| [Squamous Cell Papilloma TGLS = 1-12] | | | |
| * Uterus | | Polyp Stromal | |
| [Polyp Stromal TGLS = 1-12] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 206

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02415

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Mineralization	Minimal
* Liver		Eosinophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 207

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 37.5 PPM

DISP: Natural Death

HISTO: 88-02416

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Medulla | * Bone | * Brain | * Clitoral Gland |
| * Esophagus | * Heart | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Kidney | * Larynx | * Liver | * Lung |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Nose | * Ovary |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|-----------------------------------|---------------|----------------------------------|----------|
| * Adrenal Cortex | | Vacuolization Cytoplasmic | Moderate |
| * Bone Marrow | | Hyperplasia | Mild |
| * Lymph Node, Mediastinal | | Pigmentation | Minimal |
| * Lymph Node, Mesenteric | | Hemorrhage | Minimal |
| * Mammary Gland | | Fibroadenoma | Multiple |
| | | Lactation | Mild |
| [Fibroadenoma TGLS = 1,2-12,13] | | | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Moderate |
| [Hyperplasia TGLS = 6-1] | | | |
| * Spleen | | Hematopoietic Cell Proliferation | Mild |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 208

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02417

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
-------------------------	---------------------

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Hyperplasia	Marked
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 3-9,12]		Lactation	Moderate
* Pancreas	Acinar Cell	Atrophy	Marked
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 4-1]			
* Skin		Ulcer	Multiple, Marked
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 209

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02418

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Eosinophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
	[Eosinophilic Focus TGLS = 3-5]		
	[Hepatodiaphragmatic Nodule TGLS = 1-5]		
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-1]		
* Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 210

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02419

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Moderate
[Eosinophilic Focus TGLS = 1-5]			
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 211

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02420

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Ectasia	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Mild
		Necrosis	Mild
[Inflammation TGLS = 1-5]			
[Necrosis TGLS = 1-5]			
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 2-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 212

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02421

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Kidney	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 213

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02422

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Ovary	Bilateral	Cyst	Mild
[Cyst TGLS = 2,3-9]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Trachea		Inflammation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 214

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 37.5 PPM

DISP: Terminal Sacrifice

HISTO: 88-02423

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Brain		Compression	Minimal
* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 3,4-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12,13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 215

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02424

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 216

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02425

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Goblet Cell	Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	

[Adenoma TGLS = 1-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 217

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02426

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Ovary		Cyst	Mild
[Cyst TGLS = 1-9]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 218

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02427

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Goblet Cell	Hyperplasia	Mild
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild

[Hyperplasia TGLS = 1-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 219

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02428

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-5]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 1-5]			
* Nose	Globet Cell	Hyperplasia	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 220

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02429

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Liver

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Ovary		Cyst	Mild
[Cyst TGLS = 1-9]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
[Angiectasis TGLS = 3-1]			
* Thymus		Atrophy	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 2-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 221

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02430

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Degeneration	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Fatty Change	Mild
	[Fatty Change TGLS = 1-12]		
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
		Infiltration Cellular	Lymphocyte, Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Hyperplasia	Moderate
	[Angiectasis TGLS = 2-1]		
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 222

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02431

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
		Inflammation	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
* Liver		Basophilic Focus	Minimal
		Infiltration Cellular	Lymphocyte, Minimal
* Lung		Hemorrhage	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Globet Cell	Hyperplasia	Minimal
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
* Skin		Ulcer	Mild
	[Ulcer TGLS = 1-12]		
* Thymus		Atrophy	Minimal
* Urinary Bladder		Infiltration Cellular	Lymphocyte, Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 223

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02432

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 224

TRT#: 6

SEX: Female

DAY ON TEST: 457

DOSE: 37.5 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02433

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 281

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02490

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Vacuolization Cytoplasmic	Moderate
	[Vacuolization Cytoplasmic TGLS = 1,2-5]		
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 282

TRT#: 7

SEX: Female

DAY ON TEST: 653

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02491

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Kidney	* Larynx	* Lymph Node, Mandibular
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Clitoral Gland	* Parathyroid Gland
------------------	---------------------

OBSERVATIONS

* Adrenal Cortex	Degeneration	Mild
* Bone Marrow	Hyperplasia	Moderate
* Heart	Cardiomyopathy	Minimal
* Liver	Basophilic Focus	Multiple, Mild
	Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-12]		
* Lung	Alveolar/Bronchiolar Adenoma	
	Inflammation	Mild
[Alveolar/Bronchiolar Adenoma TGLS = 1-12]		
* Lymph Node, Bronchial	Pigmentation	Minimal
* Lymph Node, Mediastinal	Hemorrhage	Mild
* Lymph Node, Mesenteric	Hemorrhage	Moderate
* Mammary Gland	Fibroadenoma	
[Fibroadenoma TGLS = 2-13]		
* Pituitary Gland	Cyst	Mild
* Spleen	Hematopoietic Cell Proliferation	Mild
* Thymus	Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 283

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02492

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
Pharynx	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Moderate
[Basophilic Focus TGLS = 1-5]			
* Lymph Node, Bronchial		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Thymus		Atrophy	Minimal
		Hemorrhage	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Dilatation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 284

TRT#: 7

SEX: Female

DAY ON TEST: 316

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02493

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Brain |
| * Clitoral Gland | * Esophagus | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Larynx | * Liver | * Lung |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | | | |

MISSING

- * Urinary Bladder

OBSERVATIONS

- | | | |
|---------------|----------------------------------|----------|
| * Bone Marrow | Hyperplasia | Minimal |
| * Kidney | Mineralization | Minimal |
| * Spleen | Hematopoietic Cell Proliferation | Moderate |
| * Uterus | Prolapse | Moderate |

[Prolapse TGLS = 3,5-12]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 285

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 726

HISTO: 88-02494

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Clitoral Gland	* Lymph Node, Bronchial	* Parathyroid Gland
------------------	-------------------------	---------------------

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Multiple, Moderate
[Basophilic Focus TGLS = 4-13]			
[Eosinophilic Focus TGLS = 2,3-12,13]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-14]			
* Nose		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 286

TRT#: 7

SEX: Female

DAY ON TEST: 604

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02495

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Atrophy	Mild
		Myelofibrosis	Minimal
* Brain		Compression	Mild
		Hemorrhage	Moderate
		Hydrocephalus	Moderate
		Necrosis	Mild
Note: BRAIN LESIONS ARE DUE TO EXPANSION OF PITUITARY TUMOR. [Necrosis TGLS = 2-1,12]			
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Angiectasis	Mild
		Mineralization	Minimal
* Larynx		Inflammation	Mild
* Liver		Angiectasis	Mild
		Basophilic Focus	Mild
		Eosinophilic Focus	Moderate
		Inflammation	Mild
[Eosinophilic Focus TGLS = 4-5]			
* Mammary Gland		Lactation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 286

TRT#: 7

SEX: Female

DAY ON TEST: 604

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02495

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Pigmentation TGLS = 1-5]	Pigmentation	Mild
* Stomach, Forestomach [Hyperplasia TGLS = 5-4] [Inflammation TGLS = 5-4] [Ulcer TGLS = 6-4]	Hyperplasia Inflammation Ulcer	Mild Moderate Multiple, Marked
* Stomach, Glandular [Inflammation TGLS = 5-4]	Inflammation	Mild
* Thymus	Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 287

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02496

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	Pharynx	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
* Clitoral Gland		Ectasia	Mild
		Inflammation	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Pigmentation	Minimal
* Liver		Angiectasis	Mild
		Basophilic Focus	Multiple, Mild
	Centrilobular	Cytoplasmic Alteration	Mild
[Basophilic Focus TGLS = 3-5]			
[Cytoplasmic Alteration TGLS = 2-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 288

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02497

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Kidney	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Hepatodiaphragmatic Nodule	Mild
	[Hepatodiaphragmatic Nodule TGLS = 2-5]		
* Lymph Node, Bronchial		Hemorrhage	Moderate
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 1-12]		
* Pancreas	Acinar Cell	Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 289

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02498

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Brain		Compression	Mild
[Compression TGLS = 4-1]			
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
[Vacuolization Cytoplasmic TGLS = 2-5]			
* Lymph Node, Mediastinal		Vacuolization Cytoplasmic	Moderate
* Mammary Gland		Hemorrhage	Mild
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Pigmentation	Minimal
* Pituitary Gland	Pars Distalis	Fibroadenoma	
[Adenoma TGLS = 3-1]			
* Stomach, Forestomach		Atrophy	Minimal
* Thymus		Ulcer	Mild
		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 290

TRT#: 7

SEX: Female

DAY ON TEST: 674

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02499

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal
-------------------------	---------------------------

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]		Lactation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 291

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02500

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Bone Marrow |
| * Clitoral Gland | * Esophagus | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Lung | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Ovary | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|-------------------------|----------------------------|------------------|-------------------|
| * Brain | | Compression | Mild |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Mineralization | Minimal |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Minimal |
| | | Fatty Change | Mild |
| | | Inflammation | Mild |
| * Lymph Node, Bronchial | | Hemorrhage | Minimal |
| * Mammary Gland | | Lactation | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Angiectasis | Moderate |
| | Pars Distalis | Cyst | Moderate |
| | [Angiectasis TGLS = 3-1] | | |
| | [Cyst TGLS = 3-1] | | |
| * Thymus | | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 292

TRT#: 7

SEX: Female

DAY ON TEST: 730

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02501

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Brain		Hemorrhage	Mild
		Necrosis	Moderate
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 2-9]			
Eye	Bilateral, Lens	Cataract	Moderate
[Cataract TGLS = 5,6-12,13]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
		Sarcoma	
Note: FOR WHICH THERE IS NO PCT CODE.			
Note: THE TUMOR IS A RENAL MESENCHYMAL TUMOR,			
* Larynx	Epithelium	Hyperplasia	Mild
* Liver		Congestion	Mild
		Fatty Change	Minimal
* Lung		Congestion	Mild
		Hemorrhage	Mild
* Lymph Node, Bronchial		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 292	TRT#: 7	SEX: Female	DAY ON TEST: 730
	DOSE: 75 PPM	DISP: Natural Death	HISTO: 88-02501

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose		Angiectasis	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 293

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02502

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Medulla | * Bone Marrow | * Esophagus | * Heart |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Kidney |
| * Larynx | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Nose | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

- | | | |
|--------------------------|--------------------------|----------------------------|
| * Intestine Large, Cecum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|--------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|---|----------------|----------------------------|----------|
| * Adrenal Cortex | | Congestion | Mild |
| * Bone | Femur | Hyperostosis | Moderate |
| | Turbinates | Hyperostosis | Moderate |
| * Brain | | Compression | Mild |
| * Clitoral Gland | | Ectasia | Moderate |
| [Ectasia TGLS = 1-9] | | | |
| * Liver | | Basophilic Focus | Minimal |
| | | Hepatodiaphragmatic Nodule | Mild |
| | | Necrosis | Mild |
| [Hepatodiaphragmatic Nodule TGLS = 5-5] | | | |
| * Lung | Alveolar Epith | Hyperplasia | Minimal |
| [Hyperplasia TGLS = 6-6] | | | |
| * Mammary Gland | | Fibroadenoma | Multiple |
| [Fibroadenoma TGLS = 2,3-12,13] | | | |
| * Pituitary Gland | Pars Distalis | Angiectasis | Marked |
| [Angiectasis TGLS = 7-1] | | | |
| * Stom Gland | | | |
| Note: THE FOCI IN THE GLANDULAR STOMACH ARE DUE TO POST | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 293

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02502

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Hemorrhage

Moderate

PRIMARY CAUSE OF DEATH

-

Animal Note: MORTEM CHANGE.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 294

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02503

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone	Turbinate	Hyperostosis	Moderate
* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Vacuolization Cytoplasmic	Moderate
[Vacuolization Cytoplasmic TGLS = 4-5,14]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Ovary		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Thymus		Atrophy	Minimal
* Uterus		Dilatation	Mild
	Bilateral	Polyp Stromal	
[Polyp Stromal TGLS = 1,2-12,13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 295

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02504

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 3-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
		Pigmentation	Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Mixed Cell Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
[Adenoma TGLS = 2-1]			
[Angiectasis TGLS = 2-1]			
* Thymus		Atrophy	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 296

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02505

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Compression	Mild
		Hemorrhage	Minimal
[Compression TGLS = 6-1]			
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 7-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Minimal
[Basophilic Focus TGLS = 3,4-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12,13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 296	TRT#: 7	SEX: Female	DAY ON TEST: 734
	DOSE: 75 PPM	DISP: Terminal Sacrifice	HISTO: 88-02505

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen	Pigmentation	Moderate
* Uterus	Polyp Stromal	
[Polyp Stromal TGLS = 8-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 297

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 647

HISTO: 88-02506

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mandibular
-------------------------	--------------------------

OBSERVATIONS

* Brain		Compression	Mild
		Necrosis	Moderate
[Compression TGLS = 1-1]			
[Necrosis TGLS = 1-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Congestion	Mild
		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
[Lactation TGLS = 3-12,4-13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 298

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02507

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Inflammation	Minimal
		Vacuolization Cytoplasmic	Moderate
	[Vacuolization Cytoplasmic TGLS = 1-5]		
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 299

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02508

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone Marrow | * Brain |
| * Clitoral Gland | * Esophagus | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- | | |
|-------------------------|---------------------------|
| * Lymph Node, Bronchial | * Lymph Node, Mediastinal |
|-------------------------|---------------------------|

OBSERVATIONS

- | | | | |
|----------|-------|-----------------------|---------------------|
| * Bone | Femur | Hyperostosis | Mild |
| * Heart | | Cardiomyopathy | Minimal |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Larynx | | Inflammation | Mild |
| * Liver | | Basophilic Focus | Multiple, Minimal |
| | | Infiltration Cellular | Lymphocyte, Minimal |
| | | Inflammation | Minimal |

Note: ASSOCIATED WITH THE ATTACHMENT OF THE ROUND LIGAMENT.

Note: THE FOCUS DESCRIBED AS LESION #3 IS A NORMAL FINDING

[Basophilic Focus TGLS = 4-5,14,15]

[Infiltration Cellular TGLS = 4-5,14,15]

[Inflammation TGLS = 4-5,14,15]

- | | | | |
|--------|----------------|-------------|---------|
| * Lung | Alveolar Epith | Hyperplasia | Minimal |
|--------|----------------|-------------|---------|

- | | | | |
|-----------------|--|--------------|--|
| * Mammary Gland | | Fibroadenoma | |
|-----------------|--|--------------|--|

[Fibroadenoma TGLS = 1-12]

- | | | | |
|--------|--|-------------------------|--|
| Tongue | | Squamous Cell Papilloma | |
|--------|--|-------------------------|--|

[Squamous Cell Papilloma TGLS = 2-13]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 300

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 504

HISTO: 88-02509

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Rectum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Uterus

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Spleen			

OBSERVATIONS

* Brain	Glioma Malignant	
Note: AUTOLYSIS PRECLUDES A MORE DEFINITIVE		
Note: DIAGNOSIS OF THE BRAIN TUMOR.		
* Clitoral Gland	Ectasia	Moderate
* Kidney	Congestion	Mild
	Mineralization	Minimal
* Liver	Congestion	Mild
[Congestion TGLS = 1-5]		
* Lung	Congestion	Mild
[Congestion TGLS = 3-6]		
* Lymph Node, Mesenteric	Hemorrhage	Mild
* Thymus	Atrophy	Mild
	Congestion	Moderate
* Urinary Bladder	Dilatation	Moderate
[Dilatation TGLS = 4-7]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 301

TRT#: 7

SEX: Female

DAY ON TEST: 377

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02510

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex

* Brain

* Larynx

* Mammary Gland

* Parathyroid Gland

* Spleen

* Trachea

* Adrenal Medulla

* Esophagus

* Lymph Node, Mandibular

* Nose

* Pituitary Gland

* Stomach, Forestomach

* Urinary Bladder

* Bone

* Heart

* Lymph Node, Mediastinal

* Ovary

* Salivary Glands

* Stomach, Glandular

* Uterus

* Bone Marrow

* Intestine Large, Rectum

* Lymph Node, Mesenteric

* Pancreas

* Skin

* Thyroid Gland

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum

* Intestine Small, Jejunum

* Intestine Large, Colon

* Intestine Small, Duodenum

* Intestine Small, Ileum

OBSERVATIONS

* Clitoral Gland

* Kidney

* Liver

* Lung

[Congestion TGLS = 1-6]

[Hemorrhage TGLS = 1-6]

* Thymus

Ectasia

Mineralization

Congestion

Congestion

Hemorrhage

Hemorrhage

Mild

Minimal

Mild

Mild

Minimal

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 302

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 88-02511

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Mixed Cell Focus	Mild
[Basophilic Focus TGLS = 2-5]			
[Mixed Cell Focus TGLS = 3-12]			
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 1-1]			
[Angiectasis TGLS = 1-1]			
[Cyst TGLS = 1-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 303

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02512

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Minimal
		Hyperplasia	Mild
* Kidney		Necrosis	Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Multiple, Mild
		Fatty Change	Mild
[Basophilic Focus TGLS = 2-5]			
[Eosinophilic Focus TGLS = 3-5]			
[Fatty Change TGLS = 4-14]			
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mandibular		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Moderate
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Marked
* Thyroid Gland	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 304

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 88-02513

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mediastinal	* Thymus
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OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Multiple, Moderate
		Fatty Change	Moderate
[Eosinophilic Focus TGLS = 3-15]			
[Fatty Change TGLS = 6-14]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Infiltration Cellular	Histiocyte, Minimal
[Hyperplasia TGLS = 4-6]			
* Lymph Node, Bronchial		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	Multiple
		Lactation	Mild
[Fibroadenoma TGLS = 1-13,2-12]			
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 5-1]			
[Hyperplasia TGLS = 5-1]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 304

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02513

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 305

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 708

HISTO: 88-02514

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Kidney
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Histiocytic Sarcoma	
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Liver		Basophilic Focus	Multiple, Minimal
	[Histiocytic Sarcoma TGLS = 4-5,13]	Histiocytic Sarcoma	
* Lung		Congestion	Mild
		Hemorrhage	Mild
* Lymph Node, Bronchial		Histiocytic Sarcoma	
	[Histiocytic Sarcoma TGLS = 3,5-9]		
* Lymph Node, Mandibular		Histiocytic Sarcoma	
	[Histiocytic Sarcoma TGLS = 3,5-9]		
* Lymph Node, Mediastinal		Histiocytic Sarcoma	
	[Histiocytic Sarcoma TGLS = 3,5-9]		
* Lymph Node, Mesenteric		Histiocytic Sarcoma	
	[Histiocytic Sarcoma TGLS = 3,5-9]		
* Ovary		Histiocytic Sarcoma	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Histiocytic Sarcoma	
	[Histiocytic Sarcoma TGLS = 1,2-5,12]		
* Thymus		Atrophy	Moderate
		Histiocytic Sarcoma	
* Uterus	Bilateral	Polyp Stromal	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 305

TRT#: 7

SEX: Female

DAY ON TEST: 708

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02514

ORGAN AND ACCOUNTABLE SITE STATUS

[Polyp Stromal TGLS = 3,5-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 306

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02515

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland [Ectasia TGLS = 5-9]		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver [Basophilic Focus TGLS = 4-5,12] [Eosinophilic Focus TGLS = 3-5] [Hepatodiaphragmatic Nodule TGLS = 2-12]		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
* Lung		Inflammation	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland [Adenoma TGLS = 1-1]	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 307

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02516

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Medulla | * Bone | * Bone Marrow | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Ovary | * Pancreas | * Parathyroid Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|------------------------------|---------------|---------------------------|---------------|
| * Adrenal Cortex | | Angiectasis | Mild |
| | | Hypertrophy | Mild |
| | | Vacuolization Cytoplasmic | Minimal |
| * Brain | | Compression | Mild |
| * Clitoral Gland | | Ectasia | Mild |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Lymph Node, Mediastinal | | Hemorrhage | Minimal |
| | | Pigmentation | Minimal |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-12] | | | |
| * Nose | | Inflammation | Minimal |
| * Pituitary Gland | Pars Distalis | Adenoma | Multiple |
| | Pars Distalis | Angiectasis | Moderate |
| [Adenoma TGLS = 2-1] | | | |
| [Angiectasis TGLS = 2-1] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 308

TRT#: 7

SEX: Female

DAY ON TEST: 636

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02517

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Ileum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Nose	* Spleen
* Stomach, Glandular			

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Mineralization	Minimal
* Liver		Basophilic Focus	Mild
* Lung		Congestion	Mild
[Congestion TGLS = 3-6]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Thymus		Necrosis	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 309

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02518

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Hemorrhage	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Fatty Change	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 2-1]			
[Cyst TGLS = 2-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 310

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02519

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Pituitary Gland

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 2-14]		
* Pituitary Gl			
	Note: PITUITARY WAS GREATLY FRAGMENT. COULD NOT EVALUATE.		
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Minimal
* Uterus	Bilateral	Polyp Stromal	
	[Polyp Stromal TGLS = 3,4-12,9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 310

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02519

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 311

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 88-02520

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Mild
* Clitoral Gland	Bilateral	Adenoma	
		Inflammation	Moderate
	[Adenoma TGLS = 1-13,12]		
	[Inflammation TGLS = 1-13,12]		
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Fatty Change	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 2-14]		
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 3-1]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 312

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02521

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Clitoral Gland [Ectasia TGLS = 1-9]		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Cyst TGLS = 2-1]			
[Hyperplasia TGLS = 2-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 313

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02522

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Clitoral Gland		Ectasia	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Moderate
		Eosinophilic Focus	Mild
[Eosinophilic Focus TGLS = 2-13]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Adenocarcinoma	
[Adenocarcinoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Thymus		Atrophy	Moderate
* Uterus		Dilatation	Moderate
[Dilatation TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 314

TRT#: 7

SEX: Female

DAY ON TEST: 610

DOSE: 75 PPM

DISP: Moribund Sacrifice

HISTO: 88-02523

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mediastinal	* Parathyroid Gland
---------------------------	---------------------

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Clitoral Gland		Ectasia	Mild
		Inflammation	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 315

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 650

HISTO: 88-02524

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Atrophy	Moderate
* Brain		Carcinoma	Metastatic (Pituitary Gland)
		Hemorrhage	Moderate
	[Carcinoma TGLS = 3-1]		
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Mild
	[Fatty Change TGLS = 1-5]		
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Carcinoma	
	[Carcinoma TGLS = 2-1]		
* Spleen		Pigmentation	Mild
* Stomach, Forestomach		Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 315	TRT#: 7	SEX: Female	DAY ON TEST: 650
	DOSE: 75 PPM	DISP: Moribund Sacrifice	HISTO: 88-02524

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 4-4]	Ulcer	Moderate
* Thymus	Atrophy	Moderate
* Uterus	Polyp Stromal	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 316

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 705

HISTO: 88-02525

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular	* Salivary Glands
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AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
--------------------------	----------------------------

OBSERVATIONS

* Brain [Compression TGLS = 4-1]		Compression	Mild
* Clitoral Gland		Ectasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Mammary Gland [Fibroadenoma TGLS = 1,2-12,13]		Fibroadenoma	Multiple
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland [Adenoma TGLS = 3-1]	Pars Distalis	Adenoma	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 317

TRT#: 7

SEX: Female

DAY ON TEST: 735

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02526

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Minimal
		Inflammation	Minimal
* Lung	Alveolar Epith	Alveolar/Bronchiolar Adenoma	
	[Alveolar/Bronchiolar Adenoma TGLS = 2-13]	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 1-12]		
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Mild
	[Cyst TGLS = 3-1]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 318

TRT#: 7

DOSE: 75 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 88-02527

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Mild
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Nose		Angiectasis	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 1-1]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 319

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02528

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Abscess	Moderate
[Abscess TGLS = 1-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
[Basophilic Focus TGLS = 3-5]			
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 2-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 320

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02529

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
		Vacuolization Cytoplasmic	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
		Pigmentation	Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Marked
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 321

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02530

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Hemorrhage	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Minimal
[Basophilic Focus TGLS = 3-5,12]			
[Clear Cell Focus TGLS = 3-5,12]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 2-1]			
[Hyperplasia TGLS = 2-1]			
* Skin	Subcut Tiss	Lipoma	
[Lipoma TGLS = 1-13]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 322

TRT#: 7

SEX: Female

DAY ON TEST: 686

DOSE: 75 PPM

DISP: Natural Death

HISTO: 88-02531

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|--------------------------|---------------------------|
| * Adrenal Cortex | * Bone | * Bone Marrow | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Larynx | * Lung | * Lymph Node, Bronchial |
| * Lymph Node, Mesenteric | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

AUTO PRECLUDES DIAG.

- | | |
|--------------------------|----------------------------|
| * Intestine Small, Ileum | * Intestine Small, Jejunum |
|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|------------------------------|---------------|-------------------------|-------------------|
| * Adrenal Medulla | | Pheochromocytoma Benign | |
| * Brain | | Compression | Mild |
| [Compression TGLS = 4-1] | | | |
| * Clitoral Gland | | Ectasia | Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Multiple, Minimal |
| * Lymph Node, Mandibular | | Hemorrhage | Mild |
| * Lymph Node, Mediastinal | | Pigmentation | Mild |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-12] | | | |
| * Nose | | Angiectasis | Mild |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 3-1] | | | |
| * Thymus | | Atrophy | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 323

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02532

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Hemorrhage	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-9]			
* Kidney		Pigmentation	Minimal
* Liver		Inflammation	Minimal
* Lymph Node, Mandibular		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 324

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02533

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Compression	Minimal
* Clitoral Gland		Ectasia	Mild
		Inflammation	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Mild
		Inflammation	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	
Note: "NORMAL" TISSUE WAS ATTACHED TO THE HDN.			
Note: A CROSS SECTION OF THE HERNIA WAS APPARENTLY TAKEN			
Note: TANGENTIAL TO THE LIVER LOBE. NO			
[Hepatodiaphragmatic Nodule TGLS = 2-13]			
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
* Lymph Node, Mediastinal		Pigmentation	Mild
* Mammary Gland		Lactation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Thymus		Atrophy	Mild
		Hemorrhage	Minimal
Tongue		Squamous Cell Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 324

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02533

ORGAN AND ACCOUNTABLE SITE STATUS

[Squamous Cell Carcinoma TGLS = 1-12]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 325

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02534

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Minimal
* Kidney		Nephropathy	Chronic, Minimal
[Nephropathy TGLS = 2-7]			
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 326

TRT#: 7

SEX: Female

DAY ON TEST: 734

DOSE: 75 PPM

DISP: Terminal Sacrifice

HISTO: 88-02535

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Brain		Compression	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Fatty Change	Minimal
[Basophilic Focus TGLS = 3-5]			
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Moderate
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-8]			
* Ovary		Cyst	Mild
* Pancreas		Accessory Spleen	
[Accessory Spleen TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 327

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02536

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Ovary	Bilateral	Cyst	Mild
[Cyst TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 328

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02537

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Thymus		Atrophy	Minimal
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 329

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02538

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 330

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02539

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
		Inflammation	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Pigmentation	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 331

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02540

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13,2-12]			
* Nose	Goblet Cell	Hyperplasia	Minimal
* Uterus		Dilatation	Mild
[Dilatation TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 332

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02541

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-5]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 1-5]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 333

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02542

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Ectasia	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Mild
	[Eosinophilic Focus TGLS = 1-12]		
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 334

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02543

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 335

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02544

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Stomach, Forestomach		Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 336

TRT#: 7

SEX: Female

DAY ON TEST: 457

DOSE: 75 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02545

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Moderate
	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 393

TRT#: 8

SEX: Female

DAY ON TEST: 681

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02602

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
-------------------------	---------------------

OBSERVATIONS

* Brain		Compression	Mild
		Hemorrhage	Mild
			[Compression TGLS = 2-1]
			[Hemorrhage TGLS = 2-1]
* Clitoral Gland		Ectasia	Mild
		Hyperplasia	Moderate
* Heart	Endocardium	Proliferation	Moderate
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Larynx		Foreign Body	Mild
		Inflammation	Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Congestion	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
			[Adenoma TGLS = 1-1]
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:16
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 394

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02603

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Kidney	* Larynx	* Lung
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 2-1]			
[Angiectasis TGLS = 2-1]			
[Hyperplasia TGLS = 2-1]			
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 395

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02604

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Astrocytoma Benign	
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Mild
[Basophilic Focus TGLS = 2-5,12]			
[Eosinophilic Focus TGLS = 2-5,12]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 396

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 070505185030

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Brain		Compression	Mild
		Cyst	Mild
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Mammary Gland		Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 3-1]		
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 397

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02606

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Degeneration Hemorrhage Vacuolization Cytoplasmic	Moderate Moderate Moderate
[Degeneration TGLS = 2,3-3,13]			
[Hemorrhage TGLS = 2,3-3,13]			
[Vacuolization Cytoplasmic TGLS = 2,3-3,13]			
* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Mild
[Hyperplasia TGLS = 3-3]			
[Pheochromocytoma Benign TGLS = 2-13]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Mild
[Fatty Change TGLS = 4-14]			
* Lung	Alveolar Epith	Hemorrhage Hyperplasia Infiltration Cellular	Minimal Minimal Histiocyte, Minimal
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 397

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02606

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland

Pars Distalis

Hyperplasia

Mild

* Thymus

Atrophy

Mild

* Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:16

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 398

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02607

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Brain		Compression	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Mild
[Hepatodiaphragmatic Nodule TGLS = 3-13]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Mammary Gland		Adenocarcinoma	
		Lactation	Mild
[Adenocarcinoma TGLS = 2-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 399

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02608

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Bone | * Bone Marrow |
| * Brain | * Clitoral Gland | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Nose | * Ovary | * Parathyroid Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | | |
|------------------------------|----------------|------------------|--------------------|
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Multiple, Moderate |
| * Lung | Alveolar Epith | Hyperplasia | Mild |
| [Hyperplasia TGLS = 3-13] | | | |
| * Lymph Node, Mediastinal | | Pigmentation | Minimal |
| * Mammary Gland | | Fibroadenoma | |
| | | Lactation | Minimal |
| [Fibroadenoma TGLS = 1-12] | | | |
| * Pancreas | Acinar Cell | Atrophy | Moderate |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-1] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 400

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02609

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 401

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02610

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Brain		Compression	Mild
		Hydrocephalus	Mild
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Pigmentation	Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 402

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02611

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Kidney	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Multiple, Moderate
		Hepatodiaphragmatic Nodule	Mild
	[Hepatodiaphragmatic Nodule TGLS = 1-12]		
* Lung	Alveolar Epith	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 403

TRT#: 8

SEX: Female

DAY ON TEST: 608

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02612

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Colon
* Intestine Small, Duodenum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Uterus			

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Urinary Bladder			

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Congestion	Moderate
		Inflammation	Mild
[Inflammation TGLS = 1-6]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 404

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02613

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Kidney	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Vacuolization Cytoplasmic	Mild
* Heart		Cardiomyopathy	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Minimal
* Lung	Alveolar Epith	Hyperplasia	Moderate
[Hyperplasia TGLS = 3-6,13]			
Lymph Node	Lumbar	Pigmentation	Mild
[Pigmentation TGLS = 2-14]			
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 405

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 88-02614

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Minimal
* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 4-1]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Mild
* Uterus		Angiectasis	Mild
		Cyst	Marked
[Angiectasis TGLS = 3-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:17
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 405

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02614

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 2-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 406

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02615

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	Pharynx	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mandibular
-------------------------	--------------------------

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Mild
* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Moderate
		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Mammary Gland		Lactation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thyroid Gland	Follicular Cel	Carcinoma	
[Carcinoma TGLS = 1-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 407

TRT#: 8

SEX: Female

DAY ON TEST: 394

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02616

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 3-12]			
Lymph Node	Axillary	Hyperplasia	Lymphoid, Mild
[Hyperplasia TGLS = 1-12]			
* Lymph Node, Bronchial		Hemorrhage	Mild
* Nose	Goblet Cell	Hyperplasia	Minimal
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 2-13]			
* Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 408

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 88-02617

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 1-12]			
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 409

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02618

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Vacuolization Cytoplasmic	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Hepatodiaphragmatic Nodule	Mild
[Hepatodiaphragmatic Nodule TGLS = 1-5]			
* Lung		Alveolar/Bronchiolar Adenoma	Multiple
	Alveolar Epith	Hyperplasia	Moderate
[Alveolar/Bronchiolar Adenoma TGLS = 2,3-6,12]			
* Lymph Node, Bronchial		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 410

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02619

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Bone | * Bone Marrow | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular |
| * Mammary Gland | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|---------------------------|--|------------------------------|--------------------|
| * Adrenal Cortex | | Congestion | Moderate |
| * Adrenal Medulla | | Hyperplasia | Minimal |
| * Clitoral Gland | | Ectasia | Mild |
| * Heart | | Cardiomyopathy | Mild |
| | Atrium | Thrombosis | Moderate |
| | [Thrombosis TGLS = 7-4] | | |
| Islets, Pancreatic | | Adenoma | |
| | [Adenoma TGLS = 7-4] | | |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Multiple, Moderate |
| | | Developmental Malformation | Mild |
| | | Necrosis | Mild |
| | [Basophilic Focus TGLS = 9-5,13,14] | | |
| | [Developmental Malformation TGLS = 1-5] | | |
| | [Necrosis TGLS = 2,3-13] | | |
| * Lung | | Alveolar/Bronchiolar Adenoma | Multiple |
| | Alveolar Epith | Hyperplasia | Moderate |
| | [Alveolar/Bronchiolar Adenoma TGLS = 4,5-14,6] | | |
| * Lymph Node, Bronchial | | Hemorrhage | Mild |
| | [Hemorrhage TGLS = 10-8,8-5] | | |
| * Lymph Node, Mediastinal | | Hemorrhage | Moderate |
| | [Hemorrhage TGLS = 10-8,8-5] | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:17
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 410	TRT#: 8 DOSE: 150 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 88-02619
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ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Hemorrhage TGLS = 10-8,8-5]		Hemorrhage	Moderate
* Pituitary Gland [Congestion TGLS = 6-1]	Pars Distalis	Congestion Hyperplasia	Mild Mild
* Thymus		Atrophy	Mild
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 411

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02620

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
		Vacuolization Cytoplasmic	Mild
* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Infiltration Cellular	Lymphocyte, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Mild
		Pigmentation	Mild
[Inflammation TGLS = 2-5]			
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
[Alveolar/Bronchiolar Adenoma TGLS = 4-6]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose	Respirat Epith	Hyperplasia	Marked
		Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 3-1]			
* Spleen		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 1-5]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:17
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 411

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02620

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 412

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02621

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Kidney	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
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OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
* Lung		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Cyst	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 413

TRT#: 8

SEX: Female

DAY ON TEST: 234

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02622

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Kidney	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Clitoral Gland		Inflammation	Minimal
* Heart		Cardiomyopathy	Minimal
* Larynx		Inflammation	Mild
* Liver		Congestion	Mild
* Lung		Congestion	Moderate
[Congestion TGLS = 1-6]			
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Thymus		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 414

TRT#: 8

SEX: Female

DAY ON TEST: 674

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02623

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland	* Thymus
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OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Moderate
		Hyperplasia	Moderate
		Inflammation	Moderate
[Ectasia TGLS = 2-9]			
[Hyperplasia TGLS = 2-9]			
[Inflammation TGLS = 2-9]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Inflammation	Mild
[Inflammation TGLS = 4-6,13]			
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 3-1]			
* Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 415

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02624

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Larynx		Infiltration Cellular	Lymphocyte, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Moderate
	[Alveolar/Bronchiolar Adenoma TGLS = 2-12]		
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	[Adenoma TGLS = 1-1]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 416

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02625

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Uterus	

MISSING

* Lymph Node, Bronchial	* Urinary Bladder
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OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Spleen		Developmental Malformation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 417

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 88-02626

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Brain		Compression	Mild
		Hemorrhage	Mild
[Compression TGLS = 4-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Fatty Change	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
		Galactocele	Moderate
[Fibroadenoma TGLS = 1-8]			
[Galactocele TGLS = 1-8]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1]			
* Thyroid Gland	Follicular Cel	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 418

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02627

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Infiltration Cellular	Lymphocyte, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Pituitary Gland		Angiectasis	Marked
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 2-1]			
* Skin		Abscess	Moderate
[Abscess TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 419

TRT#: 8

SEX: Female

DAY ON TEST: 500

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02628

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 3-1]			
* Clitoral Gland		Ectasia	Moderate
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
		Ectopic Liver	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Spleen		Pigmentation	Mild
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 420

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 88-02629

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Ectasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Minimal
	[Alveolar/Bronchiolar Adenoma TGLS = 1-12]		
	[Hyperplasia TGLS = 2-6]		
* Lymph Node, Bronchial		Pigmentation	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose		Inflammation	Minimal
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 421

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02630

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Bone	Femur	Hyperostosis	Marked
* Bone Marrow		Myelofibrosis	Moderate
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Developmental Malformation	Minimal
[Developmental Malformation TGLS = 1-12]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 422

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02631

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
		Pigmentation	Mild
* Nose		Foreign Body	Mild
		Hemorrhage	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 423

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02632

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Thymus

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Clear Cell Focus	Minimal
		Eosinophilic Focus	Multiple, Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Bronchial		Pigmentation	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
		Pigmentation	Minimal
* Nose	Nasolacrim Dct	Inflammation	Minimal
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
		[Angiectasis TGLS = 1-1]	
		[Cyst TGLS = 1-1]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutyl nitrite
CAS Number: 542-56-3

Date Report Requested: 10/20/2014
Time Report Requested: 11:09:17
First Dose M/F: NA / NA
Lab: IIT

ANIMAL ID: 423

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02632

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 424

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02633

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone	Femur	Hyperostosis	Moderate
	Turbinates	Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
[Hyperplasia TGLS = 6-13]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-2]			
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 5-1]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 425

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02634

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Bone	Femur	Hyperostosis	Mild
	Turbinates	Hyperostosis	Mild
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 426

TRT#: 8

SEX: Female

DAY ON TEST: 533

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02635

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Larynx
* Liver	* Lymph Node, Mandibular	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Infiltration Cellular	Lymphocyte, Minimal
		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Congestion	Mild
		Mineralization	Minimal
[Congestion TGLS = 1-7]			
* Lung	Mediastinum	Rhabdomyosarcoma	Metastatic (Uncertain Primary Site)
[Rhabdomyosarcoma TGLS = 2-12]			
* Lymph Node, Bronchial		Rhabdomyosarcoma	Metastatic (Uncertain Primary Site)
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Pigmentation	Mild
* Stomach, Glandular		Ulcer	Mild
[Ulcer TGLS = 4-4]			
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 427

TRT#: 8

SEX: Female

DAY ON TEST: 617

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02636

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Inflammation	Mild
		Metaplasia	Squamous, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Necrosis	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Skin		Squamous Cell Papilloma	
	[Squamous Cell Papilloma TGLS = 1-13]		
* Thymus		Atrophy	Mild
		Hemorrhage	Minimal
Tongue		Squamous Cell Carcinoma	
	[Squamous Cell Carcinoma TGLS = 2-12]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 428

TRT#: 8

SEX: Female

DAY ON TEST: 630

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02637

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Brain	* Clitoral Gland	* Esophagus
* Kidney	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Mesenteric	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone	Femur	Hyperostosis	Mild
* Bone Marrow		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Congestion	Minimal
[Congestion TGLS = 2-5]			
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Nose		Angiectasis	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Congestion	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 429

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02638

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Inflammation	Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Carcinoma TGLS = 3-13]		
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 1-12]		
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
	[Adenoma TGLS = 2-1]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 430

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02639

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
* Lymph Node, Bronchial		Pigmentation	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
		Pigmentation	Mild
* Nose	Nasolacrim Dct	Inflammation	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 431

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02640

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Hemorrhage	Mild
		Hepatodiaphragmatic Nodule	Mild
[Hemorrhage TGLS = 1-12]			
* Lymph Node, Mediastinal		Pigmentation	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 2-1]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 432

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 622

HISTO: 88-02641

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
--------------------------	----------------------------

OBSERVATIONS

* Brain		Compression	Mild
[Compression TGLS = 3-1]			
* Clitoral Gland		Ectasia	Mild
		Hyperplasia	Mild
[Ectasia TGLS = 1-9]			
[Hyperplasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Adenoma	
		Fibroadenoma	
[Adenoma TGLS = 5-13]			
[Fibroadenoma TGLS = 4-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thymus		Hemorrhage	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 433

TRT#: 8

SEX: Female

DAY ON TEST: 483

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02642

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Brain		Compression	Moderate
[Compression TGLS = 2-12]			
* Clitoral Gland		Ectasia	Mild
* Kidney		Mineralization	Mild
* Lymph Node, Bronchial		Pigmentation	Minimal
* Mammary Gland		Lactation	Mild
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
* Spleen		Pigmentation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 434

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 696

HISTO: 88-02643

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	Ear	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 3-12]			
* Heart		Cardiomyopathy	Mild
[Thrombosis TGLS = 10-4]	Atrium	Thrombosis	Mild
* Intestine Large, Colon		Abscess	Marked
[Abscess TGLS = 6-13]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Fatty Change	Moderate
[Fatty Change TGLS = 4-5]		Necrosis	Moderate
[Necrosis TGLS = 4-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Mild
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Hematopoietic Cell Proliferation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 434

TRT#: 8

SEX: Female

DAY ON TEST: 696

DOSE: 150 PPM

DISP: Moribund Sacrifice

HISTO: 88-02643

ORGAN AND ACCOUNTABLE SITE STATUS

[Hematopoietic Cell Proliferation TGLS = 5-5]

* Stomach, Forestomach

Hyperplasia

Mild

Inflammation

Mild

* Thymus

Atrophy

Moderate

* Uterus

Cyst

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 435

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02644

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Mild
		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Mammary Gland		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-1]		
* Thymus		Atrophy	Mild
* Urinary Bladder	Arteriole	Inflammation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 436

TRT#: 8

SEX: Female

DAY ON TEST: 705

DOSE: 150 PPM

DISP: Natural Death

HISTO: 88-02645

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Kidney	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Liver		Congestion	Mild
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 437

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02646

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Lactation	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
[Angiectasis TGLS = 2-1]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 438

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 150 PPM

DISP: Terminal Sacrifice

HISTO: 88-02647

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
		Fatty Change	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith	Hyperplasia	Mild
	[Alveolar/Bronchiolar Adenoma TGLS = 2-6]		
* Lymph Node, Mediastinal		Hemorrhage	Minimal
		Pigmentation	Minimal
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 1-12]		
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Moderate
	[Hyperplasia TGLS = 3-1]		
* Spleen		Congestion	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 439

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02648

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea		

MISSING

* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Myelofibrosis	Minimal
* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Uterus		Polyp Stromal	

[Polyp Stromal TGLS = 1-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 440

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02649

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 441

TRT#: 8

DOSE: 150 PPM

SEX: Female

DISP: Scheduled Sacrifice

DAY ON TEST: 457

HISTO: 88-02650

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Clitoral Gland [Ectasia TGLS = 1-9]		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 442

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02651

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 443

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02652

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Bone	Femur	Hyperostosis	Mild
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Infiltration Cellular	Lymphocyte, Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Pancreas		Ectopic Liver	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
	[Hyperplasia TGLS = 1-1]		
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 444

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02653

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart	Cardiomyopathy	Minimal
* Kidney	Mineralization	Minimal
* Liver	Basophilic Focus	Minimal
* Lung	Hemorrhage	Moderate
* Lymph Node, Bronchial	Hemorrhage	Mild
* Lymph Node, Mediastinal	Hemorrhage	Mild
* Thymus	Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 445

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02654

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Moderate
[Hemorrhage TGLS = 1-5]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 1-5]			
* Nose	Globet Cell	Hyperplasia	Minimal
* Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 446

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02655

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	Ear	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Ectasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Minimal
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Thymus		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 447

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02656

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Goblet Cell	Hyperplasia	Minimal
	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Thymus		Atrophy	Minimal
		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05185-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutyl nitrite

CAS Number: 542-56-3

Date Report Requested: 10/20/2014

Time Report Requested: 11:09:17

First Dose M/F: NA / NA

Lab: IIT

ANIMAL ID: 448

TRT#: 8

SEX: Female

DAY ON TEST: 457

DOSE: 150 PPM

DISP: Scheduled Sacrifice

HISTO: 88-02657

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Hyperplasia	Minimal
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-12]			
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Bronchial		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Minimal
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Minimal
* Uterus		Dilatation	Minimal

PRIMARY CAUSE OF DEATH -

** END OF REPORT **

* PROTOCOL REQUIRED TISSUE