

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

C Number:	C61541C
Lock Date:	04/19/1994
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	09/07/1994

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 1	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 334 HISTO: MB070G-1
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow	Hyperplasia	Moderate
* Intestine Small, Jejunum	Diverticulum	Moderate
	Inflammation	Chronic, Moderate
[Diverticulum TGLS = 3-14]		
[Inflammation TGLS = 3-14]		
* Kidney	Nephropathy	Chronic, Minimal
* Liver	Atrophy	Mild
[Atrophy TGLS = 2-5]		
* Lymph Node, Mesenteric	Hyperplasia	Plasma Cell, Mild
[Hyperplasia TGLS = 4-8]		
* Spleen	Hematopoietic Cell Proliferation	Mild
* Testes	Adenoma	
[Adenoma TGLS = 5-9]		
* Thymus	Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 2	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 446 HISTO: MB070G-2
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Parathyroid Gland | * Pituitary Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|------------|--|------------------------------|----------------------------|
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Minimal |
| | | Congestion | Marked |
| | | Hemorrhage | Moderate |
| | [Congestion TGLS = 1-14] | | |
| | [Hemorrhage TGLS = 2-14] | | |
| * Lung | | Alveolar/Bronchiolar Adenoma | |
| | | Infiltration Cellular | Histiocyte, Focal, Minimal |
| | [Alveolar/Bronchiolar Adenoma TGLS = 3-13] | | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | [Adenoma TGLS = 4-9] | | |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 3	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: 455 HISTO: MB070G-3
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* 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

* Heart [Cardiomyopathy TGLS = 1-4]		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Necrosis	Minimal
* Lung [Hemorrhage TGLS = 2-13]		Alveolar/Bronchiolar Adenoma	
		Hemorrhage	Mild
Mesentery [Necrosis TGLS = 1-14]	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Testes [Adenoma TGLS = 3-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 4	TRT#: 1	SEX: Male	DAY ON TEST: 599
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-4

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Epididymis	* Esophagus	* Intestine Small, Duodenum	* Islets, Pancreatic
* Parathyroid Gland	* Thyroid Gland		

MISSING

* Mammary Gland	* Prostate
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 7-3]			
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone	Rib	Developmental Malformation	Focal, Mild
Note: THE BONE MALFORMATION MAY BE A HEALED FRACTURE.			
[Developmental Malformation TGLS = 10-14]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
[Leukemia Mononuclear TGLS = 6-7]			
[Nephropathy TGLS = 6-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 4	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 599 HISTO: MB070G-4
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 9-8,8-3] * Lymph Node, Mandibular	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-8,8-3] * Lymph Node, Mesenteric	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-8,8-3] * Nose	Leukemia Mononuclear	
* Pancreas	Leukemia Mononuclear	
* Pituitary Gland	Leukemia Mononuclear	
* Preputial Gland	Atrophy	Marked
	Leukemia Mononuclear	
* Salivary Glands	Leukemia Mononuclear	
* Seminal Vesicle	Depletion Cellular	Marked
[Depletion Cellular TGLS = 5-9] * Skin	Leukemia Mononuclear	
* Spleen	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-13] * Stomach, Forestomach	Leukemia Mononuclear	
* Stomach, Glandular	Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell Adenoma	
	Atrophy	Mild
	Leukemia Mononuclear	
[Adenoma TGLS = 3-9] [Atrophy TGLS = 2-9] * Thymus	Leukemia Mononuclear	
* Trachea	Leukemia Mononuclear	
* Urinary Bladder	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 5	TRT#: 1	SEX: Male	DAY ON TEST: 720
	DOSE: 0 PPM	DISP: Natural Death	HISTO: MB070G-5

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	Moderate
		Leukemia Mononuclear	
		[Hepatodiaphragmatic Nodule TGLS = 12-5]	
		[Leukemia Mononuclear TGLS = 11,13-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Hemorrhage	Mild
		[Hemorrhage TGLS = 10-3]	
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
Mesentery	Fat	Necrosis	Moderate
		[Necrosis TGLS = 5-14]	
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
		Leukemia Mononuclear	
		[Angiectasis TGLS = 14-3]	
* Seminal Vesicle		Depletion Cellular	Moderate
		[Depletion Cellular TGLS = 6-10]	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 5	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 720 HISTO: MB070G-5
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3,4-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 7,8,9-9]			
* Thyroid Gland	Follicle	Dilatation	Mild
[Dilatation TGLS = 15-2]			

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 6	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: MB070G-6
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Angiectasis	Minimal
		Basophilic Focus	Mild
		Clear Cell Focus	Minimal
		Eosinophilic Focus	Mild
		Mixed Cell Focus	Mild
* Lung	Alveolar Epith	Hyperplasia	Focal, Minimal
[Hyperplasia TGLS = 7-14]			
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Mammary Gland		Lactation	Mild
[Lactation TGLS = 2-8]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-15]			
* Nose	Cartilage	Dysplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 8-3]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 6	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: MB070G-6
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Developmental Malformation TGLS = 3-5,4-16]		Developmental Malformation	Mild
* Testes [Adenoma TGLS = 6-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 7	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-7
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* 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	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Medulla		Leukemia Mononuclear Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
Eye	Lens	Cataract	Moderate
	Retina	Degeneration	Moderate
	[Cataract TGLS = 1-16]		
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5,14]		
* Lung	Alveolar Epith	Hyperplasia Leukemia Mononuclear	Focal, Mild
	[Hyperplasia TGLS = 7-15]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration Inflammation	Minimal Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Angiectasis Leukemia Mononuclear	Marked
	[Angiectasis TGLS = 6-3]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 7	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-7
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 2-5,13,3-5]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 4-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 8	TRT#: 1	SEX: Male	DAY ON TEST: 525
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-8

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lung |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Pancreas | * Parathyroid Gland | * Preputial 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 | | Congestion | Moderate |
| Mesentery | Fat | Necrosis | Moderate |
| [Necrosis TGLS = 2-13] | | | |
| * Pituitary Gland | | Congestion | Mild |
| * Testes | Interstit Cell | Adenoma | |
| * Thymus | | Atrophy | Moderate |
| Tongue | | Squamous Cell Papilloma | |
| [Squamous Cell Papilloma TGLS = 3-14] | | | |

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 9

TRT#: 1

SEX: Male

DAY ON TEST: 684

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-9

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Skin	* Thyroid Gland	* Trachea

MISSING

* Parathyroid Gland	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-3]			
* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-3]		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 5-3]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
		Leukemia Mononuclear	
* Nose	Nasolacrim Dct	Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 9	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: MB070G-9
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ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Stomach, Forestomach		Hyperplasia	Mild
		Leukemia Mononuclear	
		Ulcer	Mild
* Stomach, Glandular		Amyloid Deposition	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 2,3,4-9]		
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 567

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-10

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Pituitary Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Cytologic Alterations	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Necrosis	Moderate
[Necrosis TGLS = 4-5]			
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
* Nose	Respirat Epith	Hyperplasia	Mild
	Nasopharyn Dct	Metaplasia	Squamous, Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-10]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 2-13]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Focal, Mild
[Adenoma TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-11

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lymph Node, Mesenteric |
| * Nose | * Parathyroid Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|--------------------------|-------------------------------------|-------------------------|-----------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Hyperplasia | Minimal |
| | | Pheochromocytoma Benign | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Mild |
| | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Degeneration | Cystic, Mild |
| | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 2-5] | | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| * Mammary Gland | | Hyperplasia | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Angiectasis | Moderate |
| | Pars Distalis | Hyperplasia | Focal, Moderate |
| | Pars Distalis | Leukemia Mononuclear | |
| | [Angiectasis TGLS = 5-3] | | |
| | [Hyperplasia TGLS = 5-3] | | |
| | [Leukemia Mononuclear TGLS = 5-3] | | |
| * Seminal Vesicle | | Depletion Cellular | Marked |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-11

ORGAN AND ACCOUNTABLE SITE STATUS

* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-14]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]			
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 12	TRT#: 1	SEX: Male	DAY ON TEST: 554
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-12

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Intestine Large, Rectum	* Islets, Pancreatic
* Parathyroid Gland			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-1]			
* Epididymis		Leukemia Mononuclear	
* Esophagus		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 12	TRT#: 1	SEX: Male	DAY ON TEST: 554
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-12

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular Leukemia Mononuclear	Moderate
[Depletion Cellular TGLS = 5-10]			
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy Leukemia Mononuclear	Mild
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-13

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Foreign Body	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-3]			
* Prostate		Inflammation	Mild
* Spleen		Leukemia Mononuclear	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 203

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-14

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|--------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Epididymis | * Esophagus | * Heart |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Ileum | * Islets, Pancreatic |
| * Liver | * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * 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 | | | |

AUTO PRECLUDES DIAG.

- | | | |
|--------------------------|-----------------------------|----------------------------|
| * Intestine Large, Cecum | * Intestine Small, Duodenum | * Intestine Small, Jejunum |
|--------------------------|-----------------------------|----------------------------|

OBSERVATIONS

- | | | |
|-------------------------------------|----------------------|----------|
| * Brain | Meningioma Malignant | |
| [Meningioma Malignant TGLS = 3-1] | | |
| * Kidney | Congestion | Moderate |
| * Thymus | Hemorrhage | Moderate |
| [Hemorrhage TGLS = 2-3] | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 449

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-15

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland	* Thymus
---------------------	----------

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Developmental Malformation	Mild
* Mammary Gland		Lactation	Mild
[Lactation TGLS = 4-8]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]			
* Preputial Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-9]			
* Prostate		Atrophy	Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Testes		Atrophy	Moderate
[Atrophy TGLS = 2-9]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 16

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-16

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Respirat Epith	Cytoplasmic Alteration	Focal, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 17

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-17

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5,5-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,14,1-16]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,14,1-16]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,14,1-16]		
* Mammary Gland		Leukemia Mononuclear	
Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 17	TRT#: 1	SEX: Male	DAY ON TEST: 732
	DOSE: 0 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-17

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 7-15]			
[Necrosis TGLS = 7-15]			
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 8-3]			
* Preputial Gland		Inflammation	Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-18

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Fungus	Mild
		Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-18

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-19

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow	Erythroid Cell	Hyperplasia	Moderate
* Epididymis		Hypospermia	Marked
		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
Lymph Node	Mediastinal	Pigmentation	Mild
[Pigmentation TGLS = 7-3]			
Mesentery	Fat	Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas		Mesothelioma Malignant	
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-13]			
* Spleen		Mesothelioma Malignant	
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
		Mesothelioma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-19

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ONLY ONE ADENOMA WAS NOTED MICROSCOPICALLY

Note: ALTHOUGH BOTH TESTES WERE NOTED TO BE GROSSLY MOTTLED.

[Atrophy TGLS = 3-9]

[Mesothelioma Malignant TGLS = 5-15]

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 20	TRT#: 1	SEX: Male	DAY ON TEST: 636
	DOSE: 0 PPM	DISP: Natural Death	HISTO: MB070G-20

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Intestine Large, Colon	* Islets, Pancreatic	* Mammary Gland
* Skin	* Stomach, Forestomach	* Trachea	

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear
* Adrenal Medulla		Leukemia Mononuclear
* Blood Vessel	Aorta	Leukemia Mononuclear
* Bone Marrow		Leukemia Mononuclear
* Brain		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 4-1]		
* Epididymis		Leukemia Mononuclear
* Esophagus		Leukemia Mononuclear
* Heart		Leukemia Mononuclear
* Intestine Large, Cecum		Leukemia Mononuclear
* Intestine Large, Rectum		Leukemia Mononuclear
* Intestine Small, Duodenum		Leukemia Mononuclear
* Kidney		Leukemia Mononuclear
* Liver		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 7-5]		
* Lung		Leukemia Mononuclear
Lymph Node	Mediastinal	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 5-3]		
* Lymph Node, Mandibular		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 5-3]		
* Lymph Node, Mesenteric		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 5-3]		
* Nose		Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 20	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 636 HISTO: MB070G-20
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy Leukemia Mononuclear	Moderate
[Leukemia Mononuclear TGLS = 6-13]			
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Hyperplasia	Mild
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 2,3-9]			
[Leukemia Mononuclear TGLS = 2,3-9]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 21

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-21

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland	* Nose
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Fibrosis	Mild
		Leukemia Mononuclear	
	[Fibrosis TGLS = 7-14]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,5-13]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,5-13]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,5-13]		
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
	[Depletion Cellular TGLS = 4-10]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 21	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-21
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear	
* Stomach, Forestomach		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Atrophy	Moderate
		Hyperplasia	Focal, Mild
[Adenoma TGLS = 2-9] [Atrophy TGLS = 3-9]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 700

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-22

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Jejunum	* Islets, Pancreatic	* Pancreas

MISSING

* Mammary Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex	Leukemia Mononuclear	
* Adrenal Medulla	Hyperplasia	Moderate
* Bone Marrow	Leukemia Mononuclear	
* Brain	Leukemia Mononuclear	
* Epididymis	Hypospermia	Marked
* Heart	Leukemia Mononuclear	
	Cardiomyopathy	Mild
* Intestine Large, Rectum	Leukemia Mononuclear	
* Intestine Small, Duodenum	Leukemia Mononuclear	
* Kidney	Leukemia Mononuclear	
* Liver	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-5]	
* Lung	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-6]	
* Lymph Node, Mandibular	Leukemia Mononuclear	
* Lymph Node, Mesenteric	Leukemia Mononuclear	
* Nose	Leukemia Mononuclear	
* Parathyroid Gland	Leukemia Mononuclear	
* Pituitary Gland	Leukemia Mononuclear	
* Preputial Gland	Leukemia Mononuclear	
* Prostate	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 22	TRT#: 1	SEX: Male	DAY ON TEST: 700
	DOSE: 0 PPM	DISP: Natural Death	HISTO: MB070G-22

ORGAN AND ACCOUNTABLE SITE STATUS

* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-13]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 2-9]		
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-23

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Necrosis	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
	[Pheochromocytoma Benign TGLS = 7-3]		
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 6-7]		
* Liver		Angiectasis	Mild
		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Hepatocellular Adenoma	Multiple
	[Angiectasis TGLS = 13-15]		
	[Hepatocellular Adenoma TGLS = 3-13,4-5]		
* Lung		Inflammation	Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Mammary Gland		Lactation	Moderate
	[Lactation TGLS = 2-8]		
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 8-16]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 12-3]		
* Seminal Vesicle		Depletion Cellular	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 23	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-23
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ORGAN AND ACCOUNTABLE SITE STATUS

* Skin	[Depletion Cellular TGLS = 9-10] Hair Follicle	Atrophy	Moderate
* Spleen	[Atrophy TGLS = 1-8] [Developmental Malformation TGLS = 5-14]	Developmental Malformation	Moderate
* Testes	Bilateral	Atrophy	Moderate
* Thymus	[Atrophy TGLS = 10-9]	Atrophy	Moderate

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-24

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Pancreas	* Pituitary Gland	* Prostate	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
		Pigmentation	Moderate
[Pigmentation TGLS = 3-7]			
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Erythrophagocytosis	Mild
Mesentery	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 24	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-24
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 4-15]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 6-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Marked
* Thyroid Gland [Carcinoma TGLS = 2-14]	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-25

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Parathyroid Gland
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Marked
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-13]		
* Kidney		Leukemia Mononuclear	
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-2,10-15,8-20]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-2,10-15,8-20]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-2,10-15,8-20]		
* Mammary Gland		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-25

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
[Depletion Cellular TGLS = 5-19]			
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2,3,4-16,17,18]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 6-9]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-3]			
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 26

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-26

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
	[Thrombosis TGLS = 1-4]		
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
	[Degeneration TGLS = 3-5]	Degeneration	Cystic, Mild
* Lung	Alveolar Epith	Hyperplasia	Focal, Minimal
		Infiltration Cellular	Histiocyte, Focal, Minimal
		Inflammation	Mild
* Nose		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Developmental Malformation	Minimal
	[Developmental Malformation TGLS = 2-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 4-9]		
* Thymus		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 26

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-26

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 27

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-27

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* 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

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Minimal
		Hepatodiaphragmatic Nodule	
		Mixed Cell Focus	Mild
[Hepatodiaphragmatic Nodule TGLS = 1-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Foreign Body	Mild
		Inflammation	Mild
* Pancreas		Accessory Spleen	
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 28

TRT#: 1

SEX: Male

DAY ON TEST: 500

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-28

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-------------------|------------|----------------------|------------------------|
| * Blood Vessel | * Bone | * Islets, Pancreatic | * Pituitary Gland |
| * Preputial Gland | * Prostate | * Seminal Vesicle | * Stomach, Forestomach |
| * Urinary Bladder | | | |

MISSING

- | | |
|-----------------|---------------------|
| * Mammary Gland | * Parathyroid Gland |
|-----------------|---------------------|

AUTO PRECLUDES DIAG.

- | | | |
|-----------------------------|--------------------------|----------------------------|
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|-----------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | |
|---|----------------------|
| * Adrenal Cortex | Leukemia Mononuclear |
| * Adrenal Medulla | Leukemia Mononuclear |
| * Bone Marrow | Leukemia Mononuclear |
| * Brain | Leukemia Mononuclear |
| * Epididymis | Leukemia Mononuclear |
| * Esophagus | Leukemia Mononuclear |
| * Heart | Leukemia Mononuclear |
| [Leukemia Mononuclear TGLS = 6-4] | |
| * Intestine Large, Cecum | Leukemia Mononuclear |
| * Intestine Large, Colon | Leukemia Mononuclear |
| * Intestine Large, Rectum | Leukemia Mononuclear |
| * Kidney | Leukemia Mononuclear |
| * Liver | Leukemia Mononuclear |
| [Leukemia Mononuclear TGLS = 2-5] | |
| * Lung | Leukemia Mononuclear |
| [Leukemia Mononuclear TGLS = 3-6] | |
| Lymph Node | Iliac |
| | Pancreatic |
| [Leukemia Mononuclear TGLS = 4-2,5-13,4-2,5-13] | |
| [Leukemia Mononuclear TGLS = 4-2,5-13,4-2,5-13] | |
| * Lymph Node, Mandibular | Leukemia Mononuclear |
| [Leukemia Mononuclear TGLS = 4-2,5-13] | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 28	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 500 HISTO: MB070G-28
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ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 4-2,5-13]		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 7-9]			
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-29

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,4-15]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,4-15]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,4-15]		
* Mammary Gland		Fibroadenoma	
		Leukemia Mononuclear	
	[Fibroadenoma TGLS = 1-13]		
* Nose		Fungus	Moderate
		Inflammation	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-29

ORGAN AND ACCOUNTABLE SITE STATUS

* Parathyroid Gland

Leukemia Mononuclear

Mild

* Pituitary Gland

Hyperplasia

* Seminal Vesicle

Leukemia Mononuclear

Depletion Cellular

Moderate

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-14]

* Testes

Bilateral, Interstit Cell

Adenoma

Leukemia Mononuclear

[Adenoma TGLS = 2-9]

* Thymus

Atrophy

Moderate

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 30

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-30

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Degeneration	Cystic, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-10]			
* Prostate		Inflammation	Moderate
* Spleen		Hematopoietic Cell Proliferation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 31	TRT#: 1	SEX: Male	DAY ON TEST: 670
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-31

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Rectum	* Islets, Pancreatic
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MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 13-8]	
* Intestine Large, Colon		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 13-8]	
* Intestine Small, Duodenum		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 11-4,8]	
* Intestine Small, Ileum		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 11-4,8]	
* Intestine Small, Jejunum		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 11-4,8]	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 670

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-31

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 10-8,9-15,7-13,8-14,1-2,10-8,9-15,7-13,8-14,1-2,10]		
[Leukemia Mononuclear TGLS = 10-8,9-15,7-13,8-14,1-2,10-8,9-15,7-13,8-14,1-2,10]		
[Leukemia Mononuclear TGLS = 10-8,9-15,7-13,8-14,1-2,10-8,9-15,7-13,8-14,1-2,10]		
* Lymph Node, Mandibular	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-8,9-15,7-13,8-14,1-2]		
* Lymph Node, Mesenteric	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-8,9-15,7-13,8-14,1-2]		
* Mammary Gland	Leukemia Mononuclear	
* Nose	Leukemia Mononuclear	
* Pancreas	Leukemia Mononuclear	
* Pituitary Gland	Leukemia Mononuclear	
* Preputial Gland	Ectasia	Mild
* Prostate	Leukemia Mononuclear	
* Salivary Glands	Leukemia Mononuclear	
* Seminal Vesicle	Depletion Cellular	Marked
	Leukemia Mononuclear	
[Depletion Cellular TGLS = 15-10]		
* Skin	Leukemia Mononuclear	
* Spleen	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]		
* Stomach, Forestomach	Hyperplasia	Mild
	Leukemia Mononuclear	
	Ulcer	Marked
[Leukemia Mononuclear TGLS = 14-4]		
[Ulcer TGLS = 14-4]		
* Stomach, Glandular	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-4]		
* Testes	Bilateral, Interstit Cell	
	Adenoma	
	Leukemia Mononuclear	
[Adenoma TGLS = 4,5,6-9]		
* Thymus	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 670

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-31

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 16-3]

* Thyroid Gland

Leukemia Mononuclear

* Trachea

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 32

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-32

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Mild
		Eosinophilic Focus	Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-14]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-14]	
* Mammary Gland		Pigmentation	Minimal
* Nose		Foreign Body	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 32	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: MB070G-32
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ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle [Depletion Cellular TGLS = 4-10]		Depletion Cellular	Moderate
* Skin [Fibroma TGLS = 1-13]	Subcut Tiss	Fibroma	
* Spleen [Leukemia Mononuclear TGLS = 2-5]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 3-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy Leukemia Mononuclear	Moderate
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-33

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood	* Blood Vessel
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Pituitary Gland	* Preputial 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		Clear Cell Focus	Mild
		Mixed Cell Focus	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Fungus	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Testes	Interstitial Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-34

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* 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
		Vacuolization Cytoplasmic	Focal, Minimal
		Necrosis	Mild
Mesentery	Fat		
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Testes	Interstit Cell	Hyperplasia	Focal, Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 35

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-35

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Mild
		Fibrosis	Mild
[Fibrosis TGLS = 2-5]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 4-3]			
* Skin		Acanthosis	Moderate
[Acanthosis TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-36

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 | * Islets, Pancreatic | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Parathyroid Gland |
| * Salivary Glands | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|---|-------------|---|---------------|
| * Adrenal Medulla | | Leukemia Mononuclear
Pheochromocytoma Benign | |
| [Pheochromocytoma Benign TGLS = 6-3] | | | |
| * Blood Vessel | Aorta | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Mild |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Nephropathy | Chronic, Mild |
| | | Eosinophilic Focus | Mild |
| | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 5-5,14] | | | |
| * Lung | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 7-6] | | | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Pituitary Gland | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 10-3] | | | |
| * Preputial Gland | | Inflammation | Mild |
| * Prostate | | Inflammation | Minimal |
| * Seminal Vesicle | | Depletion Cellular | Moderate |
| [Depletion Cellular TGLS = 9-10] | | | |
| * Skin | Lip | Basosquamous Tumor Benign | |
| [Basosquamous Tumor Benign TGLS = 1-15] | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 36	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-36
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Fibrosis TGLS = 2,3,4-13] [Leukemia Mononuclear TGLS = 2,3,4-13]		Fibrosis Leukemia Mononuclear	Marked
* Testes [Adenoma TGLS = 8-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 601

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-37

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Parathyroid Gland	* Skin	* Thyroid Gland

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-3,7-8]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-3,7-8]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-3,7-8]		
* Mammary Gland		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Atrophy	Moderate
* Prostate		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 37	TRT#: 1	SEX: Male	DAY ON TEST: 601
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-37

ORGAN AND ACCOUNTABLE SITE STATUS

* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Depletion Cellular	Marked
	[Leukemia Mononuclear TGLS = 3-5]	Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Stomach, Glandular		Hyperkeratosis	Focal, Moderate
		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
	Bilateral	Atrophy	Moderate
		Leukemia Mononuclear	
	[Adenoma TGLS = 2-9]		
	[Atrophy TGLS = 1-9]		
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-38

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Trachea		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-14,8-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,9-15]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,9-15]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,9-15]		
Mesentery		Leukemia Mononuclear	
	Fat	Necrosis	Moderate
	[Leukemia Mononuclear TGLS = 12-16]		
	[Necrosis TGLS = 12-16]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 38	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-38
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ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Minimal
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 2-17]			
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 6-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5,13,4-18]			
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 7-9]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Carcinoma Leukemia Mononuclear	
[Carcinoma TGLS = 10-2]			
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 39

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-39

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* 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
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Inflammation	Mild
		Polyp Adenomatous	Multiple
	[Polyp Adenomatous TGLS = 4-13]		
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Clear Cell Focus	Minimal
		Eosinophilic Focus	Mild
		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Minimal
		Hepatocellular Carcinoma	
		Thrombosis	Mild
	[Hepatocellular Carcinoma TGLS = 3-16]		
* Mammary Gland		Hyperplasia	Mild
* Nose	Globet Cell	Hyperplasia	Focal, Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Intermed	Angiectasis	Moderate
	[Angiectasis TGLS = 5-3,5-3]		
	[Angiectasis TGLS = 5-3,5-3]		
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 39	TRT#: 1	SEX: Male	DAY ON TEST: 733
	DOSE: 0 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-39

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 2-9,15]

* Thymus	Atrophy	Mild
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PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-40

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-5]		
* Nose		Fungus	Moderate
		Inflammation	Marked
* Pancreas	Acinar Cell	Atrophy	Moderate
* Seminal Vesicle		Depletion Cellular	Mild
	[Depletion Cellular TGLS = 2-14]		
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
	[Fibrosis TGLS = 4-13,5-5]		
	[Leukemia Mononuclear TGLS = 3-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-40

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-41

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
		Pheochromocytoma Complex	
	[Pheochromocytoma Complex TGLS = 7-3]		
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Angiectasis	Mild
		Basophilic Focus	Mild
		Degeneration	Cystic, Minimal
		Mixed Cell Focus	Mild
	[Angiectasis TGLS = 6-5]		
	[Mixed Cell Focus TGLS = 5-5]		
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
Lymph Node	Mediastinal	Hemorrhage	Mild
	[Hemorrhage TGLS = 4-13]		
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 1-14]		
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	[Angiectasis TGLS = 8-3]		
* Prostate		Hyperplasia	Focal, Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-41

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle

Depletion Cellular

Moderate

* Spleen

Developmental Malformation

Mild

[Developmental Malformation TGLS = 3-5]

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 2-9]

* Urinary Bladder

Transit Epithe

Hyperplasia

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-42

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney	Transit Epithe	Hyperplasia	Focal, Minimal
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		[Hepatodiaphragmatic Nodule TGLS = 3-15]	
* Lung		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
		[Cyst TGLS = 5-3]	
* Prostate		Hyperplasia	Focal, Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-13]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 2-9]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 42	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-42
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ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus		Atrophy	Mild
* Thyroid Gland [Carcinoma TGLS = 4-2,14]	Follicular Cel	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 43	TRT#: 1	SEX: Male	DAY ON TEST: 662
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-43

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4,5-3]			
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
[Leukemia Mononuclear TGLS = 4,5-3]			
[Pheochromocytoma Benign TGLS = 4-3]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8,9-1]			
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
[Leukemia Mononuclear TGLS = 6-7]			
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-2]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 43	TRT#: 1	SEX: Male	DAY ON TEST: 662
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-43

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 3-2]		Leukemia Mononuclear	
* Nose		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen [Leukemia Mononuclear TGLS = 2-5]		Leukemia Mononuclear	
* Stomach, Glandular		Necrosis	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1-9]			
* Thymus		Depletion Cellular	Moderate
		Leukemia Mononuclear	
* Urinary Bladder [Leukemia Mononuclear TGLS = 10-7]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-44

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lung |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial 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 | | Clear Cell Focus | Minimal |
| * Prostate | | Inflammation | Mild |
| * Testes | Interstit Cell | Adenoma | |
| | Interstit Cell | Hyperplasia | Focal, Mild |
| [Adenoma TGLS = 1-9] | | | |
| * Thymus | | Atrophy | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-45

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	* Islets, Pancreatic	* Lung
* 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		

MISSING

* Adrenal Medulla	* Blood Vessel
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OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Developmental Malformation	Mild
	[Developmental Malformation TGLS = 2-13]		
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Degeneration	Moderate
	[Angiectasis TGLS = 5-3]		
* Preputial Gland		Hyperplasia	Moderate
		Inflammation	Mild
	[Hyperplasia TGLS = 1-10]		
* Prostate		Hyperplasia	Focal, Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 3-9]		
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-45

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 495

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-47

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Parathyroid Gland	* Seminal Vesicle	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3,4-8]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3,4-8]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3,4-8]			
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 46	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 495 HISTO: MB070G-47
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ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Inflammation	Mild
* Salivary Glands		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
		Ulcer	Moderate
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-47

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Bone Marrow
* Heart
* Intestine Small, Duodenum
* Lung
* Pancreas
* Salivary Glands
* Stomach, Forestomach
* Trachea

* Adrenal Medulla
* Brain
* Intestine Large, Cecum
* Intestine Small, Ileum
* Lymph Node, Mandibular
* Parathyroid Gland
* Seminal Vesicle
* Stomach, Glandular
* Urinary Bladder

* Blood Vessel
* Epididymis
* Intestine Large, Colon
* Intestine Small, Jejunum
* Lymph Node, Mesenteric
* Pituitary Gland
* Skin
* Testes

* Bone
* Esophagus
* Intestine Large, Rectum
* Islets, Pancreatic
* Mammary Gland
* Prostate
* Spleen
* Thyroid Gland

MISSING

* Preputial Gland

OBSERVATIONS

* Kidney
* Liver
* Nose
* Thymus

Olfactory Epi

Nephropathy
Inflammation
Cytoplasmic Alteration
Atrophy
Hemorrhage

Chronic, Minimal
Chronic, Focal, Minimal
Moderate
Moderate
Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 48

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-48

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Mammary Gland	* Pancreas	* Pituitary Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Mild
* Nose		Inflammation	Mild
* Preputial Gland		Inflammation	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin	Tail	Acanthosis	Focal, Mild
[Acanthosis TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild
* Trachea		Infiltration Cellular	Lymphocyte, Focal, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
 Test Compound: Codeine
 CAS Number: 76-57-3

Date Report Requested: 10/21/2014
 Time Report Requested: 17:38:53
 First Dose M/F: NA / NA
 Lab: MBA

ANIMAL ID: 49

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-49

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Eosinophilic Focus	Moderate
	Bile Duct	Hepatocellular Adenoma	
		Hyperplasia	Mild
		Leukemia Mononuclear	
[Eosinophilic Focus TGLS = 3-13,15]			
[Hepatocellular Adenoma TGLS = 3-13,15]			
[Leukemia Mononuclear TGLS = 2-5,13,14,15]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Olfactory Epi	Degeneration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 49	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: MB070G-49
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ORGAN AND ACCOUNTABLE SITE STATUS

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

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 50

TRT#: 1

SEX: Male

DAY ON TEST: 652

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-50

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Parathyroid Gland	* Prostate	* Skin
* Stomach, Forestomach	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 16-1]		
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 13-7]		
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 12-5,14-5,14]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3,4-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-16,6-15,1-2,2-3,11-16,6-15,1-2,2-3]		
	[Leukemia Mononuclear TGLS = 11-16,6-15,1-2,2-3,11-16,6-15,1-2,2-3]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-16,6-15,1-2,2-3]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-16,6-15,1-2,2-3]		
* Mammary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 50	TRT#: 1	SEX: Male	DAY ON TEST: 652
	DOSE: 0 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-50

ORGAN AND ACCOUNTABLE SITE STATUS

Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Moderate
	[Leukemia Mononuclear TGLS = 10-17]		
	[Necrosis TGLS = 10-17]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-13]		
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
	Bilateral	Atrophy	Mild
	[Adenoma TGLS = 8-9]		
	[Atrophy TGLS = 7,9-9]		
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 51

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-51

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Moderate
		Leukemia Mononuclear	
	[Eosinophilic Focus TGLS = 4-5,5-13]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Cyst	Moderate
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-14,2-5,14]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 52

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-52

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
		Inflammation	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
		[Depletion Cellular TGLS = 1-14]	
* Spleen		Congestion	Mild
		[Congestion TGLS = 2-5]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 3-13]	
* Thymus		Atrophy	Moderate
		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 53

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-53

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* 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
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Intermed	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Focal, Minimal
[Angiectasis TGLS = 2-3]			
* Prostate		Fibrosis	Focal, Minimal
		Hyperplasia	Focal, Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-13]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 54

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-54

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Liver |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Parathyroid Gland | * Pituitary Gland | * Preputial 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 |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Testes | Interstit Cell | Adenoma | |
| | Interstit Cell | Hyperplasia | Focal, Mild |
| [Adenoma TGLS = 1-9] | | | |
| * Thymus | | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 55

TRT#: 1

SEX: Male

DAY ON TEST: 643

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-55

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|--------------------------|---------------------------|-----------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Nose | * Parathyroid Gland |
| * Prostate | * Salivary Glands | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Trachea | * Urinary Bladder | |

OBSERVATIONS

- | | | | |
|--------------------------|--|----------------------|--------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Hyperplasia | Mild |
| | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| | | Leukemia Mononuclear | |
| * Heart | | Cardiomyopathy | Mild |
| | | Leukemia Mononuclear | |
| * Intestine Small, Ileum | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| Lymph Node | Mediastinal | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 8-8,1-2,9-14] | | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 8-8,1-2,9-14] | | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 8-8,1-2,9-14] | | |
| * Mammary Gland | | Pigmentation | Mild |
| * Pancreas | | Leukemia Mononuclear | |
| * Pituitary Gland | | Leukemia Mononuclear | |
| * Preputial Gland | | Leukemia Mononuclear | |
| * Seminal Vesicle | | Depletion Cellular | Marked |
| * Spleen | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 55	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 643 HISTO: MB070G-55
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 6,7-13]			
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 2,3,4,5-9]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 56

TRT#: 1

SEX: Male

DAY ON TEST: 657

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-56

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 | * Mammary Gland | * Parathyroid Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Thymus

OBSERVATIONS

- | | | | |
|--------------------------|---------------|-------------------------------------|---------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Hyperplasia | Minimal |
| * Blood Vessel | Aorta | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Mild |
| * Heart | | Leukemia Mononuclear | |
| | | Cardiomyopathy | Mild |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 4-5] | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 1-2] | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 1-2] | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| | | Inflammation | Mild |
| | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 56	TRT#: 1 DOSE: 0 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 657 HISTO: MB070G-56
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy Leukemia Mononuclear	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Testes	Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 57

TRT#: 1

SEX: Male

DAY ON TEST: 455

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-57

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* 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		

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Intestine Small, Ileum		Cyst	Mild
* Kidney		Nephropathy	Chronic, Mild
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Mild
		Fungus	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Inflammation	Moderate
[Inflammation TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 58

TRT#: 1

SEX: Male

DAY ON TEST: 681

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-58

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Small, Duodenum	* Islets, Pancreatic	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* 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		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 6-14]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 6-14]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 6-14]	
* Mammary Gland		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Atrophy	Moderate
* Seminal Vesicle		Depletion Cellular	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 58	TRT#: 1	SEX: Male	DAY ON TEST: 681
	DOSE: 0 PPM	DISP: Natural Death	HISTO: MB070G-58

ORGAN AND ACCOUNTABLE SITE STATUS

* Skin		Leukemia Mononuclear
* Spleen		Leukemia Mononuclear
	[Leukemia Mononuclear TGLS = 2-13]	
* Testes	Bilateral, Interstit Cell	Adenoma
		Leukemia Mononuclear
	[Adenoma TGLS = 4,5-9]	
* Thymus		Leukemia Mononuclear
* Thyroid Gland	C Cell	Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 59

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-59

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Inflammation	Moderate
		Leukemia Mononuclear	
[Inflammation TGLS = 2-6]			
Lymph Node	Lumbar	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-15,4-16,5-14,1-15,4-16,5-14,1-15,4-16,5-14]			
[Leukemia Mononuclear TGLS = 1-15,4-16,5-14,1-15,4-16,5-14,1-15,4-16,5-14]			
[Leukemia Mononuclear TGLS = 1-15,4-16,5-14,1-15,4-16,5-14,1-15,4-16,5-14]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-15,4-16,5-14]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-15,4-16,5-14]			
* Mammary Gland		Hyperplasia	Mild
		Lactation	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 59	TRT#: 1	SEX: Male	DAY ON TEST: 732
	DOSE: 0 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-59

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 7-3]			
* Preputial Gland		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5,13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6-9]			
* Thymus		Atrophy Leukemia Mononuclear	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 60

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-60

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* 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		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
		[Depletion Cellular TGLS = 2-14]	
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-5]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 1-13]	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 61

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-61

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Parathyroid Gland	* Prostate	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Brain		Compression	Mild
* Epididymis		Granuloma Sperm	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
* Lymph Node, Mesenteric		Cyst	Moderate
[Cyst TGLS = 4-14]			
* Mammary Gland		Hyperplasia	Mild
* Nose		Fungus	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Focal, Mild
[Adenoma TGLS = 5-3]			
* Preputial Gland		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Mild
* Skin		Lipoma	
[Lipoma TGLS = 1-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-13]			
* Thymus		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 61

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-61

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 62

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-62

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-5-15]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 1-14]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Developmental Malformation	Mild
		Fibrosis	Mild
		Leukemia Mononuclear	
	[Developmental Malformation TGLS = 5-13]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 62	TRT#: 3	SEX: Male	DAY ON TEST: 733
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-62

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibrosis TGLS = 4-13]			
[Leukemia Mononuclear TGLS = 3-5,13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 63

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-63

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Kidney
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Pituitary Gland	* Prostate	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
	Atrium	Dilatation	Moderate
	[Dilatation TGLS = 5,6-4]		
* Liver		Degeneration	Moderate
		Fatty Change	Moderate
	[Degeneration TGLS = 2-5]		
	[Fatty Change TGLS = 2-5]		
* Nose		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Skin		Keratoacanthoma	
	[Keratoacanthoma TGLS = 1-13]		
* Spleen		Hematopoietic Cell Proliferation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 3-9]		
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 63

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-63

ORGAN AND ACCOUNTABLE SITE STATUS

Hemorrhage

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 64

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-64

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 2-10]			
* Prostate		Hyperplasia	Focal, Minimal
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 65	TRT#: 3	SEX: Male	DAY ON TEST: 426
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-65

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Skin	Subcut Tiss	Sarcoma	
[Sarcoma TGLS = 1-13]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 66

TRT#: 3

SEX: Male

DAY ON TEST: 651

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-66

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Thymus

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-6]			
Lymph Node	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-3,12-13,9-2,11-3,12-13,9-2,11-3,12-13,9-2]			
[Leukemia Mononuclear TGLS = 11-3,12-13,9-2,11-3,12-13,9-2,11-3,12-13,9-2]			
[Leukemia Mononuclear TGLS = 11-3,12-13,9-2,11-3,12-13,9-2,11-3,12-13,9-2]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-3,12-13,9-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-3,12-13,9-2]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 66	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 651 HISTO: MB070G-66
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy Leukemia Mononuclear	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 7-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-5]			
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 5,6-9]			
* Thyroid Gland	Follicular Cel	Adenoma	
[Adenoma TGLS = 3-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 67

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-67

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Moderate
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
		Pigmentation	Moderate
* Liver		Leukemia Mononuclear	
		Thrombosis	Mild
[Leukemia Mononuclear TGLS = 7-5,15]			
* Lung		Inflammation	Minimal
		Leukemia Mononuclear	
		Leukemia Mononuclear	
Lymph Node	Mediastinal		
[Leukemia Mononuclear TGLS = 2-14]			
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Mild
Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 6-16]			
[Necrosis TGLS = 6-16]			
* Nose		Fungus	Mild
		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 67	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-67
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ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Inflammation	Moderate
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5,13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 4,5-9]		
* Thymus		Atrophy	Moderate
* Trachea		Inflammation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 68

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-68

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

MISSING

* Thymus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-13]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thyroid Gland	C Cell	Adenoma	
[Adenoma TGLS = 1-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 69

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-69

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 70

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-70

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
[Hyperplasia TGLS = 5-3]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-13]			
* Prostate		Hyperplasia	Focal, Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 71

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-71

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Mammary Gland	* Thymus
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OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Brain		Astrocytoma Malignant	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Cyst	Marked
		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Moderate
[Cyst TGLS = 1-13]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-14]			
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 72

TRT#: 3

SEX: Male

DAY ON TEST: 641

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-72

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
		Pigmentation	Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Inflammation	Minimal
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3]			
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2-13]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Interstitial Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 72

TRT#: 3

SEX: Male

DAY ON TEST: 641

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-72

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4,5-9]

Leukemia Mononuclear

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 73

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-73

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial 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	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2,3-5]		
* Lung		Inflammation	Mild
		Leukemia Mononuclear	
* Nose		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5,13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 4,5-14]		
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 74

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-74

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
Mesentery		Leukemia Mononuclear	
	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-14]			
* Nose		Foreign Body	Mild
		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5,2-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 74	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-74
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ORGAN AND ACCOUNTABLE SITE STATUS

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

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 75

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-75

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Fatty Change	Mild
		Necrosis	Marked
<p>Note: ONE LIVER LOBE IS INFARCTED. [Necrosis TGLS = 3-13]</p>			
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Ectasia	Moderate
* Prostate		Atrophy	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
<p>[Depletion Cellular TGLS = 1-15]</p>			
* Testes	Bilateral, Interstit Cell	Adenoma	
<p>[Adenoma TGLS = 2-16]</p>			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 76

TRT#: 3

SEX: Male

DAY ON TEST: 720

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-76

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	Eye	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Glandular
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-15]			
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
		Pigmentation	Moderate
[Pigmentation TGLS = 10-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-6]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
Mesentery		Leukemia Mononuclear	
	Fat	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 11-18]			
[Necrosis TGLS = 11-18,12-18]			
* Nose		Fungus	Moderate
		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 76	TRT#: 3	SEX: Male	DAY ON TEST: 720
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-76

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland	Pars Distalis Pars Distalis	Leukemia Mononuclear Adenoma Cyst Leukemia Mononuclear	Mild
[Adenoma TGLS = 16-3]			
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 5-14]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-13,3-5,13]			
* Stomach, Forestomach		Hyperplasia Leukemia Mononuclear	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma Atrophy	Moderate
[Adenoma TGLS = 8,9-9]			
[Atrophy TGLS = 7-9]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 77	TRT#: 3	SEX: Male	DAY ON TEST: 678
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-77

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Rectum
* Intestine Small, Ileum	* Islets, Pancreatic	* Parathyroid Gland	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Intestine Large, Colon		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-6]			
Lymph Node	Axillary	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2,8,9-13,14,3-8,1-2,8,9-13,14,3-8]			
[Leukemia Mononuclear TGLS = 1-2,8,9-13,14,3-8,1-2,8,9-13,14,3-8]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2,8,9-13,14,3-8]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2,8,9-13,14,3-8]			
* Mammary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 77	TRT#: 3	SEX: Male	DAY ON TEST: 678
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-77

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-2]			
* 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 = 6-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-9]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 78

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-78

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-15]			
* Pituitary Gland	Pars Distalis	Cyst	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5,13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-14]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Carcinoma	
* Urinary Bladder		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 78

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-78

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 79	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: 455 HISTO: MB070G-79
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Epididymis		Edema	Focal, Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-13]			
* Testes	Interstitial Cell	Adenoma	
[Adenoma TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
 Test Compound: Codeine
 CAS Number: 76-57-3

Date Report Requested: 10/21/2014
 Time Report Requested: 17:38:53
 First Dose M/F: NA / NA
 Lab: MBA

ANIMAL ID: 80

TRT#: 3

SEX: Male

DAY ON TEST: 658

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-80

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-8,6-3,5-14,4-13,7-8,6-3,5-14,4-13,7-8,6-3,5-14,4]	
		[Leukemia Mononuclear TGLS = 7-8,6-3,5-14,4-13,7-8,6-3,5-14,4-13,7-8,6-3,5-14,4]	
		[Leukemia Mononuclear TGLS = 7-8,6-3,5-14,4-13,7-8,6-3,5-14,4-13,7-8,6-3,5-14,4]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-8,6-3,5-14,4-13]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-8,6-3,5-14,4-13]	
Mesentery	Fat	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 80	TRT#: 3	SEX: Male	DAY ON TEST: 658
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-80

ORGAN AND ACCOUNTABLE SITE STATUS

	Fat	Necrosis	Mild
	[Leukemia Mononuclear TGLS = 8-15]		
	[Necrosis TGLS = 8-15]		
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Minimal
		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 1,2-9]		
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 81

TRT#: 3

SEX: Male

DAY ON TEST: 608

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-81

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	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* 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		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
		Pigmentation	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Preputial Gland		Ectasia	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2,3-9]			
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 82

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-82

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Fatty Change	Minimal
* Lung		Alveolar/Bronchiolar Carcinoma	
	[Alveolar/Bronchiolar Carcinoma TGLS = 3-13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Fibrosis	Mild
	[Fibrosis TGLS = 2-14]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 83

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-83

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
Lymph Node	Mediastinal	Hemorrhage	Mild
[Hemorrhage TGLS = 4-3]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 6,7-3]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-13]			
* Prostate		Atrophy	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 84

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-84

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Hyperplasia	Minimal
* Mammary Gland		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-14]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-15]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
* Skin	Foot	Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 85

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-85

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5,13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 86

TRT#: 3

SEX: Male

DAY ON TEST: 627

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-86

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Trachea			

MISSING

* Prostate

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Fatty Change	Mild
* Lymph Node, Mesenteric		Cyst	Moderate
Mesentery	Fat	Necrosis	Moderate
* Nose		Adenoma	
		Chondroma	
	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Stomach, Forestomach		Hyperplasia	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 87	TRT#: 3	SEX: Male	DAY ON TEST: 732
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-87

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland	* Thymus
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OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Infiltration Cellular	Lymphocyte, Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose		Fungus	Moderate
		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 88

TRT#: 3

SEX: Male

DAY ON TEST: 684

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-88

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Brain		Hemorrhage	Minimal
* Epididymis		Hypospermia	Marked
* Heart	Atrium	Thrombosis	Moderate
* Intestine Large, Rectum		Inflammation	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Degeneration	Moderate
		Necrosis	Mild
[Degeneration TGLS = 4-5]			
[Necrosis TGLS = 4-5]			
* Lymph Node, Mesenteric		Erythrophagocytosis	Mild
		Pigmentation	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Atrophy	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
		Infiltration Cellular	Lymphocyte, Mild
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Glandular		Necrosis	Minimal
		Ulcer	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2,3-9]			
* Thymus		Atrophy	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 88

TRT#: 3

SEX: Male

DAY ON TEST: 684

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-88

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 89

TRT#: 3

SEX: Male

DAY ON TEST: 693

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-89

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Bone Marrow	Myeloid Cell	Hyperplasia	Marked
* Epididymis		Hypoplasia	Marked
		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Mesothelioma Malignant	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Necrosis	Moderate
* Lung		Leukocytosis	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
		Mesothelioma Malignant	
		Necrosis	Mild
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-10]			
* Prostate		Inflammation	Minimal
* Skin	Subcut Tiss	Fibroma	
		Ulcer	Marked
[Fibroma TGLS = 4-13]			
[Ulcer TGLS = 4-13]			
* Spleen		Necrosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 89	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 693 HISTO: MB070G-89
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ORGAN AND ACCOUNTABLE SITE STATUS

[Necrosis TGLS = 3-5]			
* Stomach, Glandular		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:53

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 90

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-90

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Mild
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Moderate
		Foreign Body	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 91

TRT#: 3

SEX: Male

DAY ON TEST: 679

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-91

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Parathyroid Gland	* Prostate
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Mild
* Heart		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Axillary	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-18,10-17,13-8,11-16,3-14,9-15,8-18,10-17,13-8,11]			
[Leukemia Mononuclear TGLS = 8-18,10-17,13-8,11-16,3-14,9-15,8-18,10-17,13-8,11]			
[Leukemia Mononuclear TGLS = 8-18,10-17,13-8,11-16,3-14,9-15,8-18,10-17,13-8,11]			
[Leukemia Mononuclear TGLS = 8-18,10-17,13-8,11-16,3-14,9-15,8-18,10-17,13-8,11]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-18,10-17,13-8,11-16,3-14,9-15]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-18,10-17,13-8,11-16,9-15,3-14]			
Mesentery	Fat	Necrosis	Marked
[Necrosis TGLS = 4-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 91	TRT#: 3	SEX: Male	DAY ON TEST: 679
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-91

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-3]			
* Preputial Gland		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
		Leukemia Mononuclear	
* Spleen			
[Leukemia Mononuclear TGLS = 5-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-9]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 92

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-92

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Fibrosis	Mild
* Nose		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Ectasia	Marked
[Ectasia TGLS = 2-10]			
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 4-10]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Urinary Bladder		Infiltration Cellular	Lymphocyte, Minimal

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 93

TRT#: 3

SEX: Male

DAY ON TEST: 684

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-93

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Pigmentation	Moderate
		[Leukemia Mononuclear TGLS = 5-7]	
		[Pigmentation TGLS = 5-7]	
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Axillary	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-14,4-13,6-16,7-14,4-13,6-16,7-14,4-13,6-16]	
		[Leukemia Mononuclear TGLS = 7-14,4-13,6-16,7-14,4-13,6-16,7-14,4-13,6-16]	
		[Leukemia Mononuclear TGLS = 7-14,4-13,6-16,7-14,4-13,6-16,7-14,4-13,6-16]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-14,4-13,6-16]	
* Pancreas	Acinar Cell	Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:53
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 93	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: MB070G-93
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Atrophy	Mild
* Spleen		Depletion Cellular	Marked
	[Leukemia Mononuclear TGLS = 3-5,9-15]	Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1,2-9]	Leukemia Mononuclear	
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	
* Thyroid Gland	Follicle	Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 94

TRT#: 3

SEX: Male

DAY ON TEST: 701

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-94

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Mild
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13]			
* Nose	Nasolacrim Dct	Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 95

TRT#: 3

SEX: Male

DAY ON TEST: 695

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-95

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|------------------------|-----------------|
| * Blood Vessel | * Bone | * Esophagus | * Heart |
| * Intestine Large, Colon | * Intestine Small, Jejunum | * Islets, Pancreatic | * Prostate |
| * Salivary Glands | * Skin | * Stomach, Forestomach | * Thyroid Gland |
| * Trachea | | | |

MISSING

- | | |
|---------------------|----------|
| * Parathyroid Gland | * Thymus |
|---------------------|----------|

OBSERVATIONS

- | | | | |
|-----------------------------|---|----------------------|------------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Hyperplasia | Marked |
| | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Leukemia Mononuclear | |
| Ear | Pinna | Leukemia Mononuclear | |
| | Pinna | Schwannoma Malignant | |
| | [Leukemia Mononuclear TGLS = 1-17] | | |
| | [Schwannoma Malignant TGLS = 1-17] | | |
| * Epididymis | | Hypospermia | Marked |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| * Intestine Large, Rectum | | Leukemia Mononuclear | |
| * Intestine Small, Duodenum | | Leukemia Mononuclear | |
| * Intestine Small, Ileum | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| | | Pigmentation | Mild |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| | | Schwannoma Malignant | Metastatic (Ear) |
| | [Schwannoma Malignant TGLS = 3-14] | | |
| Lymph Node | Mediastinal | Leukemia Mononuclear | |
| | Renal | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 7-15,5-16,4-13,2-2,7-15,5-16,4-13,2-2] | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 95	TRT#: 3	SEX: Male	DAY ON TEST: 695
	DOSE: 400 PPM	DISP: Natural Death	HISTO: MB070G-95

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 7-15,5-16,4-13,2-2,7-15,5-16,4-13,2-2] * Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 7-15,5-16,4-13,2-2] * Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 7-15,5-16,4-13,2-2] * Mammary Gland * Nose * Pancreas * Pituitary Gland * Preputial Gland * Seminal Vesicle * Spleen [Leukemia Mononuclear TGLS = 6-5] * Stomach, Glandular * Testes [Adenoma TGLS = 8,9-9] * Urinary Bladder	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear Depletion Cellular Leukemia Mononuclear Leukemia Mononuclear Necrosis Adenoma Leukemia Mononuclear	Marked Mild
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PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 96

TRT#: 3

SEX: Male

DAY ON TEST: 732

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-96

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Mild
		Fatty Change	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-13]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 97

TRT#: 3

SEX: Male

DAY ON TEST: 624

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-97

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Thyroid Gland
* Trachea			

MISSING

* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-13]	
* Mammary Gland		Pigmentation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Nervosa	Cyst	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-5]	
* Stomach, Glandular		Necrosis	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 97	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 624 HISTO: MB070G-97
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ORGAN AND ACCOUNTABLE SITE STATUS

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

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 98

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-98

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Olfactory Epi	Vacuolization Cytoplasmic	Focal, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Inflammation	Mild
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 99

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-99

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
[Basophilic Focus TGLS = 5-5]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-14,6-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-10]			
* Spleen		Congestion	Mild
[Congestion TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 7-2]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 100

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-100

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Clear Cell Focus	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 101

TRT#: 3

SEX: Male

DAY ON TEST: 336

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-101

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Heart		Alveolar/Bronchiolar Carcinoma Mineralization	Metastatic (Lung) Focal, Mild
* Kidney	Bilateral	Hydronephrosis Nephropathy	Mild Chronic, Mild
	[Hydronephrosis TGLS = 9-7]		
	[Nephropathy TGLS = 8-7]		
* Liver		Congestion	Mild
* Lung	Mediastinum	Alveolar/Bronchiolar Carcinoma Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 1-3,14,3,2-6,13,1-3,14,3,2-6,13]		
	[Alveolar/Bronchiolar Carcinoma TGLS = 1-3,14,3,2-6,13,1-3,14,3,2-6,13]		
Lymph Node	Mediastinal	Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 1-3]		
* Pancreas	Acinar Cell	Atrophy	Minimal
* Prostate		Hemorrhage	Mild
		Inflammation	Mild
* Seminal Vesicle		Dilatation	Mild
	[Dilatation TGLS = 10-10]		
Skeletal Muscle	Thoracic	Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
	[Alveolar/Bronchiolar Carcinoma TGLS = 6-14]		
* Thymus		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 101

TRT#: 3

SEX: Male

DAY ON TEST: 336

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-101

ORGAN AND ACCOUNTABLE SITE STATUS

* Urinary Bladder

Dilatation

Moderate

Hemorrhage

Mild

[Dilatation TGLS = 4-7]

[Hemorrhage TGLS = 5-7]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 102

TRT#: 3

SEX: Male

DAY ON TEST: 711

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-102

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------|--------------------------|-----------------------------|----------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Heart | * Intestine Large, Colon | * Intestine Small, Duodenum | * Intestine Small, Jejunum |
| * Islets, Pancreatic | * Lymph Node, Mesenteric | * Mammary Gland | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Preputial Gland | * Seminal Vesicle |
| * Skin | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

AUTO PRECLUDES DIAG.

- | | | |
|--------------------------|---------------------------|--------------------------|
| * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Ileum |
|--------------------------|---------------------------|--------------------------|

OBSERVATIONS

- | | | | |
|--------------------------|---|-------------------------|--------------|
| * Adrenal Cortex | | Hemorrhage | Mild |
| * Adrenal Medulla | | Hyperplasia | Mild |
| | | Pheochromocytoma Benign | |
| * Bone Marrow | | Hyperplasia | Moderate |
| * Epididymis | | Hypospermia | Mild |
| * Kidney | Glomerulus | Degeneration | Mild |
| | | Pigmentation | Mild |
| * Liver | | Degeneration | Cystic, Mild |
| | | Degeneration | Marked |
| | Bile Duct | Hyperplasia | Mild |
| | [Degeneration TGLS = 3-5,3-5,3-5,3-5] | | |
| | [Degeneration TGLS = 3-5,3-5,3-5,3-5] | | |
| * Lung | | Hemorrhage | Minimal |
| Lymph Node | Mediastinal | Hemorrhage | Moderate |
| | [Hemorrhage TGLS = 1-13] | | |
| * Lymph Node, Mandibular | | Hemorrhage | Mild |
| | [Hemorrhage TGLS = 1-13] | | |
| Mesentery | Fat | Necrosis | Moderate |
| | [Necrosis TGLS = 5-14] | | |
| * Nose | | Adenoma | |
| | | Inflammation | Mild |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 102	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 711 HISTO: MB070G-102
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ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Inflammation	Mild
* Salivary Glands		Inflammation	Chronic, Mild
* Spleen		Congestion	Mild
		Hematopoietic Cell Proliferation	Minimal
		Infiltration Cellular	Histiocyte, Mild
	[Congestion TGLS = 2-5]		
	[Infiltration Cellular TGLS = 2-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 103

TRT#: 3

SEX: Male

DAY ON TEST: 632

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-103

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|----------------------------|----------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Brain | * Epididymis | * Esophagus | * Intestine Large, Colon |
| * Intestine Small, Duodenum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Kidney |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Pancreas | * Parathyroid Gland | * Prostate | * Salivary Glands |
| * Skin | * Stomach, Forestomach | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

AUTO PRECLUDES DIAG.

- | | | |
|--------------------------|---------------------------|--------------------------|
| * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Ileum |
|--------------------------|---------------------------|--------------------------|

OBSERVATIONS

- | | | | |
|----------------------|---------------------------|---|----------------------------|
| * Bone Marrow | | Hyperplasia | Moderate |
| * Heart | | Cardiomyopathy | Mild |
| * Liver | | Basophilic Focus | Minimal |
| * Lung | | Infiltration Cellular | Histiocyte, Focal, Minimal |
| | | Inflammation | Minimal |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| | Pars Intermed | Adenoma | |
| * Preputial Gland | | Adenoma | |
| | | Inflammation | Moderate |
| | | [Adenoma TGLS = 1-10] | |
| | | [Inflammation TGLS = 1-10] | |
| * Seminal Vesicle | | Depletion Cellular | Moderate |
| * Spleen | | Hematopoietic Cell Proliferation | Moderate |
| | | [Hematopoietic Cell Proliferation TGLS = 4-5] | |
| * Stomach, Glandular | | Ulcer | Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | | [Adenoma TGLS = 2,3-9] | |
| * Thymus | | Atrophy | Mild |
| | | Hemorrhage | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 103

TRT#: 3

SEX: Male

DAY ON TEST: 632

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-103

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 104

TRT#: 3

SEX: Male

DAY ON TEST: 615

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-104

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Glandular
* Thyroid Gland	* Trachea		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Atrophy	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Ulcer	Mild
* Testes	Interstit Cell	Adenoma	
	Bilateral	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Focal, Mild
	[Adenoma TGLS = 2-9]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 104

TRT#: 3

SEX: Male

DAY ON TEST: 615

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-104

ORGAN AND ACCOUNTABLE SITE STATUS

[Atrophy TGLS = 1-9]

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 105

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-105

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Fungus	Mild
		Infiltration Cellular	Lymphocyte, Focal, Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Focal, Mild
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 106

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-106

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lung

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Inflammation	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 107

TRT#: 3

SEX: Male

DAY ON TEST: 707

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-107

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Cecum		Adenoma	
[Adenoma TGLS = 11-15]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 14-7]			
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15,16-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 17-6]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 12-13]			
[Necrosis TGLS = 12-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 107	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 707 HISTO: MB070G-107
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ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 5-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6,7,8,9-9]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 108

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-108

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Goblet Cell	Hyperplasia	Focal, Mild
		Infiltration Cellular	Lymphocyte, Focal, Mild
* Preputial Gland		Ectasia	Moderate
		Hyperplasia	Mild
[Ectasia TGLS = 1-10]			
[Hyperplasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Focal, Mild
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 109

TRT#: 3

SEX: Male

DAY ON TEST: 549

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-109

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum * Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-6,14]			
Lymph Node	Bronchial	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Preputial Gland		Ectasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 109	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 549 HISTO: MB070G-109
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ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate [Inflammation TGLS = 7-10]		Inflammation	Mild
* Spleen [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear	
* Stomach, Forestomach		Ulcer	Mild
* Testes	Interstit Cell	Hyperplasia	Focal, Mild
* Thymus [Leukemia Mononuclear TGLS = 5-3]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 110

TRT#: 3

SEX: Male

DAY ON TEST: 678

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-110

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	* Lymph Node, Mandibular	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Marked
	[Leukemia Mononuclear TGLS = 7-4]		
	[Thrombosis TGLS = 7-4]		
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-14,5-6,6-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-13]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 110

TRT#: 3

SEX: Male

DAY ON TEST: 678

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-110

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 111

TRT#: 3

DOSE: 400 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 651

HISTO: MB070G-111

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex	Leukemia Mononuclear	
* Adrenal Medulla	Hyperplasia	Mild
	Leukemia Mononuclear	
* Bone Marrow	Leukemia Mononuclear	
* Epididymis	Hypospermia	Moderate
* Heart	Cardiomyopathy	Mild
	Leukemia Mononuclear	
* Intestine Large, Colon	Leukemia Mononuclear	
* Kidney	Leukemia Mononuclear	
	Pigmentation	Mild
* Liver	Hepatodiaphragmatic Nodule	Mild
	Leukemia Mononuclear	
	[Hepatodiaphragmatic Nodule TGLS = 9-5]	
	[Leukemia Mononuclear TGLS = 8-5]	
* Lung	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-15]	
Lymph Node	Mediastinal	Leukemia Mononuclear
	[Leukemia Mononuclear TGLS = 1-2,3,4-3,10-8]	
* Lymph Node, Mandibular	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,3,4-3,10-8]	
* Lymph Node, Mesenteric	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,3,4-3,10-8]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 111	TRT#: 3	SEX: Male	DAY ON TEST: 651
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-111

ORGAN AND ACCOUNTABLE SITE STATUS

* Mammary Gland		Leukemia Mononuclear Pigmentation	Mild
* Nose		Leukemia Mononuclear	
* Pancreas		Ectopic Liver	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
		[Fibrosis TGLS = 7-14]	
		[Leukemia Mononuclear TGLS = 6-13,14]	
* Testes	Interstit Cell	Adenoma	
		Leukemia Mononuclear	
		[Adenoma TGLS = 5-9]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 112

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-112

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 4-15]			
* Lung		Inflammation	Mild
[Inflammation TGLS = 5-6]			
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Skin	Tail	Inflammation	Marked
	Tail	Necrosis	Marked
[Inflammation TGLS = 1-13]			
[Necrosis TGLS = 1-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 113

TRT#: 3

SEX: Male

DAY ON TEST: 404

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-113

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Thymus	* Thyroid Gland	* Trachea

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-13]			
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 5-5]			
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-8]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-15]			
* Nose		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
Spinal Cord		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-14]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Stomach, Forestomach		Hyperplasia	Minimal
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 113

TRT#: 3

SEX: Male

DAY ON TEST: 404

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-113

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Glandular

Leukemia Mononuclear

* Testes

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 9-9]

* Urinary Bladder

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 2-7]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 114

TRT#: 3

SEX: Male

DAY ON TEST: 706

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-114

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Minimal
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Lumbar	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8-16,6-14,8-16,6-14]		
	[Leukemia Mononuclear TGLS = 8-16,6-14,8-16,6-14]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8-16,6-14]		
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 5-15]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 114	TRT#: 3 DOSE: 400 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: MB070G-114
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
		Leukemia Mononuclear	
		Adenoma	
* Preputial Gland			
[Adenoma TGLS = 1-13]			
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 115

TRT#: 3

SEX: Male

DAY ON TEST: 586

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-115

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* 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

* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Inflammation	Chronic, Focal, Minimal
* Lung		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 116

TRT#: 3

SEX: Male

DAY ON TEST: 574

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-116

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 4-9]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-3,9-14,2-15,10-3,9-14,2-15]			
[Leukemia Mononuclear TGLS = 10-3,9-14,2-15,10-3,9-14,2-15]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-3,9-14,2-15]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-3,9-14,2-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Prostate		Infiltration Cellular	Lymphocyte, Focal, Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 116

TRT#: 3

SEX: Male

DAY ON TEST: 574

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-116

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 8-13]

* Stomach, Forestomach

Leukemia Mononuclear

* Testes

Bilateral, Interstit Cell

Adenoma

Mesothelioma Malignant

[Adenoma TGLS = 5,6,7-9]

[Mesothelioma Malignant TGLS = 4-9]

* Thymus

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 117

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-117

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial 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
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Infiltration Cellular	Lymphocyte, Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 118

TRT#: 3

SEX: Male

DAY ON TEST: 615

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-118

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Rectum
* Intestine Small, Ileum	* Islets, Pancreatic	* Parathyroid Gland	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Fibrosis	Focal, Moderate
		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-3,1-2,6-8]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-3,1-2,6-8]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-3,1-2,6-8]	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 118	TRT#: 3	SEX: Male	DAY ON TEST: 615
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-118

ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland		Leukemia Mononuclear	
* Prostate		Atrophy	Marked
		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-13]		
* Stomach, Forestomach		Hyperkeratosis	Focal, Moderate
		Hyperplasia	Moderate
		Leukemia Mononuclear	
		Ulcer	Moderate
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Interstit Cell	Adenoma	
		Atrophy	Marked
		Leukemia Mononuclear	
	[Adenoma TGLS = 3-9]		
	[Atrophy TGLS = 2-9]		
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 119

TRT#: 3

SEX: Male

DAY ON TEST: 657

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-119

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-5]		
* Lung		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Stomach, Glandular		Ulcer	Mild
* Testes	Interstit Cell	Adenoma	
		Atrophy	Mild
		Leukemia Mononuclear	
	[Adenoma TGLS = 1-9]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 119

TRT#: 3

SEX: Male

DAY ON TEST: 657

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-119

ORGAN AND ACCOUNTABLE SITE STATUS

[Atrophy TGLS = 2-9]

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 120

TRT#: 3

SEX: Male

DAY ON TEST: 455

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-120

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
		Vacuolization Cytoplasmic	Focal, Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Hemorrhage	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 121

TRT#: 5

SEX: Male

DAY ON TEST: 550

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-121

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-5]	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
		[Fibrosis TGLS = 4-5]	
		[Leukemia Mononuclear TGLS = 3-5]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 1,2-9]	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 122

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-122

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Pituitary Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-13]			
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 123

TRT#: 5

SEX: Male

DAY ON TEST: 726

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-123

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Nose	* Prostate	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea

MISSING

* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Thymus
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OBSERVATIONS

* Bone Marrow		Hemorrhage	Marked
		Necrosis	Marked
* Epididymis		Hypospermia	Marked
* Intestine Large, Colon		Amyloid Deposition	Mild
* Kidney		Infiltration Cellular	Lymphocyte, Mild
		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Fibrosis	Moderate
		Hematopoietic Cell Proliferation	Mild
		Infiltration Cellular	Lymphocyte, Moderate
		Necrosis	Moderate
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
		Infiltration Cellular	Lymphocyte, Mild
		Inflammation	Minimal
		[Infiltration Cellular TGLS = 5-6,5-6,5-6,5-6]	
		[Infiltration Cellular TGLS = 5-6,5-6,5-6,5-6]	
		[Inflammation TGLS = 5-6]	
* Lymph Node, Mandibular		Amyloid Deposition	Moderate
		Hemorrhage	Mild
		[Amyloid Deposition TGLS = 7-8]	
* Lymph Node, Mesenteric		Amyloid Deposition	Marked
		[Amyloid Deposition TGLS = 7-8]	
* Mammary Gland		Infiltration Cellular	Lymphocyte, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 123	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 726 HISTO: MB070G-123
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ORGAN AND ACCOUNTABLE SITE STATUS

Mesentery [Necrosis TGLS = 6-13]	Fat	Necrosis	Marked
* Pancreas	Acinar Cell	Amyloid Deposition	Moderate
		Atrophy	Moderate
* Salivary Glands		Infiltration Cellular	Lymphocyte, Moderate
		Amyloid Deposition	Moderate
		Atrophy	Moderate
		Infiltration Cellular	Lymphocyte, Moderate
* Seminal Vesicle		Depletion Cellular	Marked
		Infiltration Cellular	Lymphocyte, Moderate
		Necrosis	Marked
* Spleen [Necrosis TGLS = 4-5]	Bilateral, Interstit Cell		
* Testes [Adenoma TGLS = 2,3-9]		Adenoma	
* Urinary Bladder		Amyloid Deposition	Moderate
		Infiltration Cellular	Lymphocyte, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 124

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-124

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-6]			
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Moderate
* Pancreas		Accessory Spleen	
	Acinar Cell	Atrophy	Mild
[Accessory Spleen TGLS = 1-13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Prostate		Atrophy	Mild
* Testes		Congestion	Focal, Mild
	Interstitial Cell	Hyperplasia	Focal, Mild
[Congestion TGLS = 3-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 125

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-125

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* 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

* Kidney		Nephropathy	Chronic, Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 126

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-126

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
Lymph Node	Mediastinal	Pigmentation	Moderate
[Pigmentation TGLS = 2-3]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-14,4-15]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Focal, Moderate
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-9]			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Carcinoma	
[Carcinoma TGLS = 1-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 127

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-127

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 5-3]			
* Preputial Gland		Adenoma	
		Hyperplasia	Mild
[Adenoma TGLS = 1-14]			
* Seminal Vesicle		Depletion Cellular	Moderate
Skeletal Muscle	Back	Lipoma	
[Lipoma TGLS = 2-15]			
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 3-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 128

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 567
HISTO: MB070G-128

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
* Liver	Bile Duct	Leukemia Mononuclear	
		Hyperplasia	Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Prostate		Inflammation	Mild
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-13]		
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Focal, Minimal
	[Adenoma TGLS = 3-9]		
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 128

TRT#: 5

SEX: Male

DAY ON TEST: 567

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-128

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 129

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-129

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5,13]		
* Lung		Inflammation	Mild
		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 4-15]		
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5,14]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 2-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 130

TRT#: 5

DOSE: 800 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 658

HISTO: MB070G-130

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
		Pigmentation	Mild
		Leukemia Mononuclear	
* Liver			
		[Leukemia Mononuclear TGLS = 4-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-3,6-8]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-3,6-8]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-3,6-8]	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 130

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 658
HISTO: MB070G-130

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3-5]

* Testes

Bilateral, Interstit Cell

Adenoma

Leukemia Mononuclear

[Adenoma TGLS = 1,2-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 131

TRT#: 5

SEX: Male

DAY ON TEST: 638

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-131

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* 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	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Moderate
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
* Prostate		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 131

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 638
HISTO: MB070G-131

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 2,3,4-9]

* Thymus

Atrophy
Leukemia Mononuclear

Marked

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 132

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-132

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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, Mandibular	* 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 Cortex		Angiectasis	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 133

TRT#: 5

SEX: Male

DAY ON TEST: 665

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-133

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
		Pigmentation	Mild
[Pigmentation TGLS = 2-7]			
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Hemorrhage	Mild
	Mediastinal	Leukemia Mononuclear	
	Mediastinal	Pigmentation	Mild
[Leukemia Mononuclear TGLS = 4-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 133	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 665 HISTO: MB070G-133
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Leukemia Mononuclear Atrophy	Minimal
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Depletion Cellular	Marked
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-13]		
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
	[Adenoma TGLS = 1-9]		
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 134

TRT#: 5

SEX: Male

DAY ON TEST: 634

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-134

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Thyroid Gland
* Trachea			

AUTO PRECLUDES DIAG.

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

* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-5]	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-8]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 2-5]	
* Stomach, Glandular		Ulcer	Mild
		[Ulcer TGLS = 6-4]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 3,4-9]	
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 134

TRT#: 5

SEX: Male

DAY ON TEST: 634

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-134

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 135

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-135

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
	[Basophilic Focus TGLS = 7-5]		
	[Leukemia Mononuclear TGLS = 6-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 2-14]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Seminal Vesicle		Depletion Cellular	Marked
* Skin		Squamous Cell Carcinoma	
	[Squamous Cell Carcinoma TGLS = 1-15]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5,13]		
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 135

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-135

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 3-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 136

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-136

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|--------------------------|---------------------------|-----------------------|----------------------------|
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Lung | | Hemorrhage | Minimal |
| | | Infiltration Cellular | Histiocyte, Focal, Minimal |
| | | Necrosis | Mild |
| Mesentery | Fat | | |
| [Necrosis TGLS = 1-13] | | | |
| * Nose | Olfactory Epi | Atrophy | Focal, Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| [Adenoma TGLS = 2-9] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 137

TRT#: 5

SEX: Male

DAY ON TEST: 580

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-137

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Hemorrhage	Moderate
[Hemorrhage TGLS = 6-3]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4,5-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 138

TRT#: 5

SEX: Male

DAY ON TEST: 638

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-138

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Mild
		Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Mild
Eye		Phthisis Bulbi	Moderate
[Phthisis Bulbi TGLS = 5-14]			
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Pigmentation	Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 138

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 638
HISTO: MB070G-138

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland		Leukemia Mononuclear	
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Atrophy	Mild
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 139

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-139

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Hyperplasia	Focal, Moderate
[Angiectasis TGLS = 3-3]			
[Hyperplasia TGLS = 3-3]			
* Seminal Vesicle		Depletion Cellular	Moderate
[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: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 140

TRT#: 5

SEX: Male

DAY ON TEST: 722

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-140

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
		Mesothelioma Malignant	
* Heart	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 5-4]			
* Intestine Large, Cecum		Adenoma	
[Adenoma TGLS = 4-13]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Degeneration	Moderate
[Degeneration TGLS = 3-5]			
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Stomach, Forestomach		Hyperplasia	Minimal
* Stomach, Glandular		Necrosis	Mild
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
		Mesothelioma Malignant	
[Adenoma TGLS = 2-9]			
[Atrophy TGLS = 1-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 140

TRT#: 5

SEX: Male

DAY ON TEST: 722

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-140

ORGAN AND ACCOUNTABLE SITE STATUS

[Mesothelioma Malignant TGLS = 6-16]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 141

TRT#: 5

SEX: Male

DAY ON TEST: 559

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-141

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Parathyroid Gland	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-14,7-8,1-2,15,6-13,5-14,7-8,1-2,15,6-13]		
	[Leukemia Mononuclear TGLS = 5-14,7-8,1-2,15,6-13,5-14,7-8,1-2,15,6-13]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-14,7-8,1-2,15,6-13]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-14,7-8,1-2,15,6-13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Inflammation	Mild
* Prostate		Atrophy	Mild
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 141	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 559 HISTO: MB070G-141
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 2-5]		Leukemia Mononuclear
* Testes [Adenoma TGLS = 3,9-9]	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear
* Thymus [Leukemia Mononuclear TGLS = 8-3]		Leukemia Mononuclear
* Thyroid Gland		Leukemia Mononuclear
* Urinary Bladder		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 142

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Scheduled Sacrifice

DAY ON TEST: 455
HISTO: MB070G-142

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Lung	* Lymph Node, Mandibular	* 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

* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Edema	Focal, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 1-10]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 143

TRT#: 5

SEX: Male

DAY ON TEST: 687

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-143

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
	Atrium	Leukemia Mononuclear	
* Intestine Large, Colon		Thrombosis	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-5]	
* Lung		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 10-15]	
Lymph Node	Axillary	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-2,9-16,8-8,6-13,1-2,9-16,8-8,6-13]	
		[Leukemia Mononuclear TGLS = 1-2,9-16,8-8,6-13,1-2,9-16,8-8,6-13]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-2,9-16,8-8,6-13]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 143	TRT#: 5	SEX: Male	DAY ON TEST: 687
	DOSE: 800 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-143

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 1-2,9-16,8-8,6-13]

* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Inflammation	Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
		Leukemia Mononuclear	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5,5-14]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 144

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-144

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear Vacuolization Cytoplasmic	Focal, Mild
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear Leukemia Mononuclear Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
Mesentery	Fat	Leukemia Mononuclear Necrosis	Moderate
[Necrosis TGLS = 5-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Minimal
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 6-3]			
[Leukemia Mononuclear TGLS = 6-3]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-15]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 144

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 732
HISTO: MB070G-144

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
	[Fibrosis TGLS = 3-17]		
	[Leukemia Mononuclear TGLS = 2-5,13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 4-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 145

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-145

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Thymus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Epididymis		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Mild
Mesentery		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Goblet Cell	Hyperplasia	Focal, Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Testes		Mesothelioma Malignant	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 146

TRT#: 5

SEX: Male

DAY ON TEST: 687

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-146

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea			

MISSING

* Thymus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
		Ulcer	Marked
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
		Thrombosis	Moderate
		[Leukemia Mononuclear TGLS = 3-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-13]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-13]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-13]	
* Mammary Gland		Pigmentation	Mild
Mesentery		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 146	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 687 HISTO: MB070G-146
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ORGAN AND ACCOUNTABLE SITE STATUS

Fat	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 6-14]		
[Necrosis TGLS = 6-14]		
* Nose	Leukemia Mononuclear	
* Pancreas	Leukemia Mononuclear	
* Pituitary Gland	Leukemia Mononuclear	
* Preputial Gland	Leukemia Mononuclear	
* Prostate	Leukemia Mononuclear	
* Seminal Vesicle	Depletion Cellular	Marked
* Spleen	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]		
* Testes	Bilateral, Interstit Cell	
	Adenoma	
[Adenoma TGLS = 1,2-9]		
[Leukemia Mononuclear TGLS = 1,2-9]		
* Urinary Bladder	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 147

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-147

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea			

MISSING

* Preputial Gland

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Eosinophilic Focus	Mild
		Leukemia Mononuclear	
		Thrombosis	Mild
		[Leukemia Mononuclear TGLS = 5-5]	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
		[Necrosis TGLS = 4-19]	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 147

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 732
HISTO: MB070G-147

ORGAN AND ACCOUNTABLE SITE STATUS

* Skin [Fibroma TGLS = 1-13]	Subcut Tiss	Leukemia Mononuclear Fibroma	
* Spleen [Leukemia Mononuclear TGLS = 3-5,14]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 6-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Marked
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 148

TRT#: 5

SEX: Male

DAY ON TEST: 638

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-148

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* 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	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Pigmentation	Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Nose		Fungus	Moderate
		Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Moderate
		Hyperplasia	Mild
[Ectasia TGLS = 1-10]			
[Hyperplasia TGLS = 1-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 148

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 638
HISTO: MB070G-148

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes
[Adenoma TGLS = 3,4,5-9]

Bilateral, Interstit Cell

Adenoma

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 149

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Scheduled Sacrifice

DAY ON TEST: 455
HISTO: MB070G-149

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Adrenal Medulla

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Eosinophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Hemorrhage	Mild
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 150

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-150

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Minimal
		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 151

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Scheduled Sacrifice

DAY ON TEST: 455
HISTO: MB070G-151

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Focal, Mild
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 152

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-152

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Minimal
		Inflammation	Chronic, Focal, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Nasolacrim Dct	Inflammation	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 2-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 153

TRT#: 5

SEX: Male

DAY ON TEST: 712

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-153

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pituitary Gland	* Prostate	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum * Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-5]		
* Lung	Mediastinum	Leukemia Mononuclear	
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-14,2-14]		
	[Leukemia Mononuclear TGLS = 2-14,2-14]		
* Nose		Leukemia Mononuclear	
		Thrombosis	Moderate
* Pancreas		Leukemia Mononuclear	
* Preputial Gland	Bilateral	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 1-13]		
* Seminal Vesicle		Depletion Cellular	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 153	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 712 HISTO: MB070G-153
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ORGAN AND ACCOUNTABLE SITE STATUS

* Skin [Necrosis TGLS = 6-16]	Tail	Necrosis	Marked
* Spleen [Leukemia Mononuclear TGLS = 3-5]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 5-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 154

TRT#: 5

SEX: Male

DAY ON TEST: 526

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-154

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Nose	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-1]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-8,3-2,7-2]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-8,3-2,7-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-8,3-2,7-2]			
* Mammary Gland		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 2-10]			
* Prostate		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 154	TRT#: 5	SEX: Male	DAY ON TEST: 526
	DOSE: 800 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-154

ORGAN AND ACCOUNTABLE SITE STATUS

* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Stomach, Glandular		Ulcer	Mild
* Testes	Interstit Cell	Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 155

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-155

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Mild
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild
* Thyroid Gland	Follicle	Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 156

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-156

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 157

TRT#: 5

SEX: Male

DAY ON TEST: 720

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-157

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea			

MISSING

* Intestine Small, Ileum	* Thymus
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OBSERVATIONS

* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
Ear	Pinna	Schwannoma Malignant	
	[Schwannoma Malignant TGLS = 1-13]		
* Epididymis		Hypospermia	Marked
* Heart	Atrium	Leukemia Mononuclear	
	[Thrombosis TGLS = 12-4]	Thrombosis	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8,9,10-5,6,7-5]	Thrombosis	Moderate
* Lung		Leukemia Mononuclear	
	[Schwannoma Malignant TGLS = 11-6]	Schwannoma Malignant	Metastatic (Ear)
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
		Leukemia Mononuclear	
* Nose	Respirat Epith	Foreign Body	Minimal
		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 157	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: MB070G-157
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Inflammation Atrophy Leukemia Mononuclear	Mild Minimal
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 3-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-9]			
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 158

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-158

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 159

TRT#: 5

SEX: Male

DAY ON TEST: 635

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-159

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Infarct	Mild
		Nephropathy	Chronic, Minimal
* Liver		Clear Cell Focus	Mild
* Lung		Inflammation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Prostate		Inflammation	Mild
* Skin	Subcut Tiss	Fibroma	
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 160

TRT#: 5

SEX: Male

DAY ON TEST: 707

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-160

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 | * Lymph Node, Mesenteric | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Stomach, Forestomach | * Stomach, Glandular |
| * Trachea | | | |

OBSERVATIONS

- | | | | |
|--------------------------|---|----------------------------|------------------------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | Bilateral | Pheochromocytoma Malignant | |
| | [Pheochromocytoma Malignant TGLS = 6,7-3] | | |
| * Blood Vessel | Aorta | Leukemia Mononuclear | |
| * Bone Marrow | | Hyperplasia | Moderate |
| | | Pheochromocytoma Malignant | Metastatic (Adrenal Medulla) |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Leukemia Mononuclear | |
| | [Pheochromocytoma Malignant TGLS = 12-5] | Pheochromocytoma Malignant | Metastatic (Adrenal Medulla) |
| * Lung | | Leukemia Mononuclear | |
| | [Pheochromocytoma Malignant TGLS = 4-6] | Pheochromocytoma Malignant | Metastatic (Adrenal Medulla) |
| Lymph Node | Renal | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 8-13] | | |
| * Lymph Node, Mandibular | | Hyperplasia | Plasma Cell, Mild |
| * Mammary Gland | | Fibroadenoma | |
| | | Hyperplasia | Mild |
| | [Fibroadenoma TGLS = 1-17] | Leukemia Mononuclear | |
| Mesentery | Fat | Necrosis | Moderate |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 160 **TRT#:** 5 **SEX:** Male **DAY ON TEST:** 707
DOSE: 800 PPM **DISP:** Moribund Sacrifice **HISTO:** MB070G-160

ORGAN AND ACCOUNTABLE SITE STATUS

[Necrosis TGLS = 13-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas		Accessory Spleen	
[Accessory Spleen TGLS = 11-14]			
Penis		Angiectasis	Moderate
		Inflammation	Mild
		Leukemia Mononuclear	
[Angiectasis TGLS = 16-16]			
[Inflammation TGLS = 16-16]			
[Leukemia Mononuclear TGLS = 16-16]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Adenoma	
[Adenoma TGLS = 2-10]			
* Prostate		Inflammation	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 14-9]			
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	
[Atrophy TGLS = 3-3]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 5-2]			
Urethra	Transit Epithe	Hyperplasia	Moderate
		Inflammation	Moderate
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate
		Inflammation	Moderate
[Hyperplasia TGLS = 15-7]			
[Inflammation TGLS = 15-7]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 161

TRT#: 5

SEX: Male

DAY ON TEST: 546

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-161

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Intestine Small, Jejunum [Adenocarcinoma TGLS = 3-14]		Adenocarcinoma	
* Kidney		Nephropathy	Chronic, Mild
* Lymph Node, Mesenteric [Cyst TGLS = 2-13]		Cyst	Multiple, Moderate
* Nose	Glands	Dilatation	Focal, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
		Edema	Moderate
* Seminal Vesicle		Depletion Cellular	Moderate
* Stomach, Forestomach [Ulcer TGLS = 4-15]		Edema	Marked
		Ulcer	Marked
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Focal, Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 162

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-162

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-6]			
Lymph Node	Mediastinal	Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 163

TRT#: 5

SEX: Male

DAY ON TEST: 706

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-163

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Necrosis	Moderate
* Epididymis		Hypospermia	Marked
* Kidney		Infarct	Mild
		Leukemia Mononuclear	
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-5]	
* Lung		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-6]	
Mesentery	Fat	Necrosis	Moderate
		[Necrosis TGLS = 6-13]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
		[Depletion Cellular TGLS = 1-10]	
* Skin		Trichoepithelioma	
		[Trichoepithelioma TGLS = 9-14]	
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 5-5]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 163

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 706
HISTO: MB070G-163

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes
[Adenoma TGLS = 2,3,4-9]

Bilateral, Interstit Cell

Adenoma

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 164

TRT#: 5

SEX: Male

DAY ON TEST: 455

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-164

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic | * Lung |
| * Lymph Node, Mandibular | * 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 Cortex | | Adenoma | |
| | | Vacuolization Cytoplasmic | Focal, Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Hepatodiaphragmatic Nodule | |
| [Hepatodiaphragmatic Nodule TGLS = 1-13] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Focal, Minimal |
| * Testes | Interstit Cell | Adenoma | |
| * Thymus | | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 165

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-165

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Thymus

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Focal, Minimal
* Preputial Gland		Ectasia	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
	[Depletion Cellular TGLS = 2-10]		
* Skin		Keratoacanthoma	
	[Keratoacanthoma TGLS = 1-13]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 3-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 166

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-166

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Inflammation	Minimal
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Dilatation	Moderate
		[Dilatation TGLS = 4-14]	
* Seminal Vesicle		Ectasia	Moderate
		[Ectasia TGLS = 3-10]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 2-9,1-9]	
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 167

TRT#: 5

SEX: Male

DAY ON TEST: 726

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-167

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	Eye
* Intestine Large, Rectum	* Islets, Pancreatic	* Parathyroid Gland	* Skin
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Thymus

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
		Mesothelioma Malignant	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-18,6-18]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 12-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8-15,1-2,13,11-3,15-17,5-14,8-15,1-2,13,11-3,15-17]		
	[Leukemia Mononuclear TGLS = 8-15,1-2,13,11-3,15-17,5-14,8-15,1-2,13,11-3,15-17]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 167

TRT#: 5

SEX: Male

DAY ON TEST: 726

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-167

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 8-15,1-2,13,11-3,15-17,5-14,8-15,1-2,13,11-3,15-17]

* Lymph Node, Mandibular

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 8-15,1-2,13,11-3,15-17,5-14]

* Lymph Node, Mesenteric

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 8-15,1-2,13,11-3,15-17,5-14]

* Mammary Gland

Lactation

Mild

Mesentery

Mesothelioma Malignant

* Nose

Olfactory Epi

Cytoplasmic Alteration

Mild

Leukemia Mononuclear

* Pancreas

Leukemia Mononuclear

* Pituitary Gland

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 14-3]

* Preputial Gland

Bilateral

Adenoma

Hyperplasia

Moderate

Leukemia Mononuclear

[Adenoma TGLS = 2-10]

[Leukemia Mononuclear TGLS = 2-10]

* Prostate

Leukemia Mononuclear

* Salivary Glands

Leukemia Mononuclear

* Seminal Vesicle

Depletion Cellular

Marked

Leukemia Mononuclear

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 10-19,9-5,19]

* Stomach, Forestomach

Hyperplasia

Mild

Leukemia Mononuclear

Ulcer

Moderate

* Testes

Bilateral, Interstit Cell

Adenoma

Leukemia Mononuclear

[Adenoma TGLS = 3-9,4-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 168

TRT#: 5

SEX: Male

DAY ON TEST: 574

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-168

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large, Rectum
* Islets, Pancreatic	* Skin		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
		Inflammation	Moderate
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Parathyroid Gland		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 168

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Natural Death

DAY ON TEST: 574
HISTO: MB070G-168

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Leukemia Mononuclear
* Spleen		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 4-13]		
* Stomach, Forestomach		Leukemia Mononuclear
* Stomach, Glandular		Leukemia Mononuclear
* Testes	Bilateral, Interstit Cell	Adenoma
		Leukemia Mononuclear
[Adenoma TGLS = 1,2-9]		
* Thymus		Leukemia Mononuclear
* Thyroid Gland		Leukemia Mononuclear
* Trachea		Leukemia Mononuclear
* Urinary Bladder		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 169

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-169

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 5-7]			
* Liver		Basophilic Focus	Minimal
[Fatty Change TGLS = 6-5]		Fatty Change	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 7-14]			
* Preputial Gland		Ectasia	Mild
		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 4-10]			
* Spleen		Hematopoietic Cell Proliferation	Mild
[Hematopoietic Cell Proliferation TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 169

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 732
HISTO: MB070G-169

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus	Atrophy	Mild
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PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 170

TRT#: 5

SEX: Male

DAY ON TEST: 695

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-170

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Islets, Pancreatic	* Parathyroid Gland	* Skin
* Thyroid Gland	* Trachea		

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3,4-7]		
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-13]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-13]		
* Mammary Gland		Leukemia Mononuclear	
Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Mild
	[Leukemia Mononuclear TGLS = 12-16]		
	[Necrosis TGLS = 12-16]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 170	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 695 HISTO: MB070G-170
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ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Minimal
* Pancreas		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-15]			
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Depletion Cellular Leukemia Mononuclear	Marked
[Depletion Cellular TGLS = 1-10]			
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Ectasia Leukemia Mononuclear	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6,9-5,14]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 7,8-9]			
* Thymus		Atrophy Leukemia Mononuclear	Marked
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 171

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-171

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Degeneration	Cystic, Mild
		Developmental Malformation	Mild
[Developmental Malformation TGLS = 5-5]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-13]			
* Nose		Angiectasis	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
	Artery	Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-10]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 171

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 732
HISTO: MB070G-171

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 172

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-172

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Pituitary Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 5-16]			
[Leukemia Mononuclear TGLS = 4-5]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin		Hemorrhage	Mild
		Inflammation	Mild
		Keratoacanthoma	
[Hemorrhage TGLS = 1-13.1]			
[Inflammation TGLS = 1-13.1]			
[Keratoacanthoma TGLS = 2-14]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 172

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: MB070G-172

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 6-9]	Bilateral, Interstit Cell	Adenoma
* Thyroid Gland	C Cell	Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 173

TRT#: 5

SEX: Male

DAY ON TEST: 655

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-173

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
	Atrium	Dilatation	Mild
	Atrium	Thrombosis	Mild
	[Dilatation TGLS = 8-4]		
	[Thrombosis TGLS = 8-4]		
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
	[Nephropathy TGLS = 3-7]		
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Moderate
	[Hepatodiaphragmatic Nodule TGLS = 6-5]		
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Mammary Gland		Galactocele	Mild
* Nose	Olfactory Epi	Atrophy	Focal, Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Adenoma	
	[Adenoma TGLS = 1-13]		
* Spleen		Hematopoietic Cell Proliferation	Moderate
	[Hematopoietic Cell Proliferation TGLS = 4,5-5]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 173

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 655
HISTO: MB070G-173

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes
[Adenoma TGLS = 2-9]

Bilateral, Interstit Cell

Adenoma

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 174

TRT#: 5

SEX: Male

DAY ON TEST: 720

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-174

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Pituitary Gland
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-3]			
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-3]			
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-6]			
Lymph Node	Lumbar	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-17,12-14,13-15,4-18,1-13,15-17,12-14,13-15,4-18]			
[Leukemia Mononuclear TGLS = 15-17,12-14,13-15,4-18,1-13,15-17,12-14,13-15,4-18]			
[Leukemia Mononuclear TGLS = 15-17,12-14,13-15,4-18,1-13,15-17,12-14,13-15,4-18]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-17,12-14,13-15,4-18,1-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 174

TRT#: 5

DOSE: 800 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 720

HISTO: MB070G-174

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 15-17,12-14,13-15,4-18,1-13]		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose		Leukemia Mononuclear	
		Thrombosis	Moderate
* Pancreas [Leukemia Mononuclear TGLS = 14-16]		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 3-5] [Necrosis TGLS = 5-5]		Leukemia Mononuclear	
		Necrosis	Mild
* Testes [Adenoma TGLS = 8-9,7-9]	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
* Thymus [Leukemia Mononuclear TGLS = 2-3]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 175

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-175

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Mild
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Minimal
* Kidney	Renal Tubule	Adenoma	
* Liver		Leukemia Mononuclear	
		Thrombosis	Mild
	[Leukemia Mononuclear TGLS = 7-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Mammary Gland		Infiltration Cellular	Histiocyte, Mild
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 6-15]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Foreign Body	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Adenoma	
		Ectasia	Moderate
	[Adenoma TGLS = 1-14]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 175	TRT#: 5 DOSE: 800 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 732 HISTO: MB070G-175
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ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle [Depletion Cellular TGLS = 5-10]		Depletion Cellular	Moderate
* Spleen [Leukemia Mononuclear TGLS = 3-5,13,2-5,13]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 4-9]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 176

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-176

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
		Vacuolization Cytoplasmic	Focal, Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
* Nose		Angiectasis	Moderate
	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 177

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 519
HISTO: MB070G-177

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Epididymis

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 178

TRT#: 5

SEX: Male

DAY ON TEST: 608

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-178

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 4-3]			
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Moderate
		Leukemia Mononuclear	
* Esophagus		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3]			
* Mammary Gland		Lactation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 178

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 608
HISTO: MB070G-178

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Depletion Cellular	Moderate
	[Leukemia Mononuclear TGLS = 5-5]	Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1,2,3-9]	Leukemia Mononuclear	
* Thymus		Atrophy	Mild
		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 179

TRT#: 5

SEX: Male

DAY ON TEST: 732

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-179

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Minimal
		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]			
* Preputial Gland		Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 180

TRT#: 5

SEX: Male

DAY ON TEST: 658

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-180

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Pancreas | * Parathyroid Gland |
| * Prostate | * Salivary Glands | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Trachea | * Urinary Bladder | |

MISSING

- * Thymus

OBSERVATIONS

- | | | | |
|-------------------|-------------------------------------|-------------------------|----------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| | | Pheochromocytoma Benign | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| Lymph Node | Mediastinal | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 4-3] | | |
| * Mammary Gland | | Leukemia Mononuclear | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| | | Fungus | Moderate |
| | | Inflammation | Moderate |
| * Pituitary Gland | | Leukemia Mononuclear | |
| * Preputial Gland | | Leukemia Mononuclear | |
| * Seminal Vesicle | | Depletion Cellular | Marked |
| * Spleen | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 1-5] | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | [Adenoma TGLS = 2,3-9] | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 180

TRT#: 5
DOSE: 800 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 658
HISTO: MB070G-180

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 181

TRT#: 7

SEX: Male

DAY ON TEST: 571

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-181

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|--------------------------|
| * Blood Vessel | * Bone | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Islets, Pancreatic |
| * Preputial Gland | * Prostate | * Skin | |

MISSING

- * Thymus

OBSERVATIONS

- | | | | |
|--------------------------------------|---------------|------------------------|-------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Leukemia Mononuclear | |
| * Epididymis | | Leukemia Mononuclear | |
| * Heart | | Leukemia Mononuclear | |
| * Intestine Large, Colon | | Leukemia Mononuclear | |
| * Intestine Small, Jejunum | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| Lymph Node | Bronchial | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-14] | | | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-14] | | | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-14] | | | |
| * Mammary Gland | | Leukemia Mononuclear | |
| * Nose | Olfactory Epi | Atrophy | Focal, Mild |
| | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| | | Leukemia Mononuclear | |
| * Parathyroid Gland | | Leukemia Mononuclear | |
| * Pituitary Gland | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 181

TRT#: 7

SEX: Male

DAY ON TEST: 571

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-181

ORGAN AND ACCOUNTABLE SITE STATUS

* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1,2-9]			
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 182

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-182

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Congestion	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 2-3]			
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Congestion	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-13]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 183

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-183

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Liver |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|----------|---------------------------|------------------------|------------------|
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | [Adenoma TGLS = 1,2-9] | | |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 184

TRT#: 7

SEX: Male

DAY ON TEST: 543

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-184

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone

* Intestine Large, Rectum

* Intestine Small, Ileum

* Islets, Pancreatic

OBSERVATIONS

* Adrenal Cortex

Angiectasis

Mild

Leukemia Mononuclear

* Adrenal Medulla

Leukemia Mononuclear

* Blood Vessel

Aorta

Leukemia Mononuclear

* Bone Marrow

Leukemia Mononuclear

* Brain

Leukemia Mononuclear

* Epididymis

Leukemia Mononuclear

* Esophagus

Leukemia Mononuclear

* Heart

Leukemia Mononuclear

* Intestine Large, Cecum

Leukemia Mononuclear

* Intestine Large, Colon

Leukemia Mononuclear

* Intestine Small, Duodenum

Leukemia Mononuclear

* Intestine Small, Jejunum

Leukemia Mononuclear

* Kidney

Leukemia Mononuclear

* Liver

Leukemia Mononuclear

* Lung

Leukemia Mononuclear

Lymph Node

Mediastinal

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-13,5-8,2-3]

* Lymph Node, Mandibular

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-13,5-8,2-3]

* Lymph Node, Mesenteric

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-13,5-8,2-3]

* Mammary Gland

Leukemia Mononuclear

* Nose

Olfactory Epi

Cytoplasmic Alteration

Minimal

Leukemia Mononuclear

* Pancreas

Leukemia Mononuclear

* Parathyroid Gland

Leukemia Mononuclear

* Pituitary Gland

Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 184

TRT#: 7

SEX: Male

DAY ON TEST: 543

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-184

ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 4-9]		
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 185

TRT#: 7

SEX: Male

DAY ON TEST: 687

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-185

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Moderate
* Mammary Gland		Pigmentation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Marked
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Ectasia	Minimal
		Leukemia Mononuclear	
[Ectasia TGLS = 1-10]			
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 185	TRT#: 7	SEX: Male	DAY ON TEST: 687
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-185

ORGAN AND ACCOUNTABLE SITE STATUS

Spinal Cord [Hemangioma TGLS = 5-13]		Hemangioma	
* Spleen [Leukemia Mononuclear TGLS = 2-5]		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Minimal
		Leukemia Mononuclear	
		Ulcer	Moderate
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 3,4-9]			
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 186

TRT#: 7

SEX: Male

DAY ON TEST: 700

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-186

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pituitary Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Moderate
		Necrosis	Moderate
* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Brain		Astrocytoma Malignant	
* Epididymis		Hypospermia	Marked
		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
* Intestine Large, Colon		Ulcer	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Degeneration	Marked
		Hemorrhage	Moderate
[Degeneration TGLS = 3-5]			
[Hemorrhage TGLS = 3-5]			
* Mammary Gland		Hyperplasia	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Preputial Gland		Hyperplasia	Moderate
		Inflammation	Mild
[Hyperplasia TGLS = 2-10]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 186	TRT#: 7	SEX: Male	DAY ON TEST: 700
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-186

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Glandular		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
		Mesothelioma Malignant	
[Adenoma TGLS = 4,5,6-9]			
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 187

TRT#: 7

SEX: Male

DAY ON TEST: 708

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-187

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|----------------------|---------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Islets, Pancreatic | * Kidney |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Pancreas | * Parathyroid Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Thymus

AUTO PRECLUDES DIAG.

- | | | |
|-----------------------------|--------------------------|----------------------------|
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|-----------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|------------------------------|---------------------------|-------------------------|----------|
| * Adrenal Cortex | | Angiectasis | Minimal |
| | | Leukemia Mononuclear | |
| | | Pheochromocytoma Benign | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Hypospermia | Mild |
| * Epididymis | | Cardiomyopathy | Mild |
| * Heart | | Leukemia Mononuclear | |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Fibroadenoma | |
| * Mammary Gland | | Leukemia Mononuclear | |
| | | | |
| [Fibroadenoma TGLS = 1-13] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| | | Leukemia Mononuclear | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| | | | |
| [Adenoma TGLS = 3-3] | | | |
| * Seminal Vesicle | | Depletion Cellular | Marked |
| * Spleen | | Leukemia Mononuclear | |
| * Stomach, Glandular | | Ulcer | Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 187

TRT#: 7

SEX: Male

DAY ON TEST: 708

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-187

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 2-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 188

TRT#: 7

SEX: Male

DAY ON TEST: 730

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-188

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Skin	* Urinary Bladder		

MISSING

* Pituitary Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Esophagus		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 6-13]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 6-13]	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Parathyroid Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 188

TRT#: 7

SEX: Male

DAY ON TEST: 730

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-188

ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 2,3,4-14]		
	[Leukemia Mononuclear TGLS = 2,3,4-14]		
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 189

TRT#: 7

SEX: Male

DAY ON TEST: 585

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-189

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-1]			
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14,6-16,9-17,7-8,5-15,4-14,6-16,9-17,7-8,5-15,4-]			
[Leukemia Mononuclear TGLS = 4-14,6-16,9-17,7-8,5-15,4-14,6-16,9-17,7-8,5-15,4-]			
[Leukemia Mononuclear TGLS = 4-14,6-16,9-17,7-8,5-15,4-14,6-16,9-17,7-8,5-15,4-]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-16,9-17,7-8,5-15,4-14]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14,6-16,9-17,7-8,5-15]			
* Mammary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 189	TRT#: 7	SEX: Male	DAY ON TEST: 585
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-189

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Mild
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-3]			
* Preputial Gland		Inflammation	Moderate
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-13]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 190

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-190

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
[Cardiomyopathy TGLS = 1-4]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Inflammation	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 2-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 191

TRT#: 7

SEX: Male

DAY ON TEST: 582

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-191

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart	Atrium	Thrombosis	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lymph Node, Mesenteric		Hemorrhage	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-13]			
* Spleen		Hematopoietic Cell Proliferation	Mild
[Hematopoietic Cell Proliferation TGLS = 4-5]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]		Atrophy	Moderate
[Atrophy TGLS = 3-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 192

TRT#: 7

SEX: Male

DAY ON TEST: 621

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-192

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	Coagulating Gland	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Preputial Gland	* Prostate	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea		

MISSING

* Parathyroid Gland	* Pituitary Gland	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-13]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-13]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-13]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 192

TRT#: 7

SEX: Male

DAY ON TEST: 621

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-192

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle

Leukemia Mononuclear

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-5]

* Stomach, Glandular

Leukemia Mononuclear

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 4-9]

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 193

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-193

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Liver		Basophilic Focus	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 194

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-194

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Lung	* Lymph Node, Mandibular	* 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

MISSING

* Thymus

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Liver		Inflammation	Chronic, Focal, Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Testes	Interstit Cell	Hyperplasia	Focal, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 195

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-195

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|------------------------|---------------------------|------------------------|------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Mild |
| * Lung | | Inflammation | Minimal |
| * Nose | Olfactory Epi | Atrophy | Focal, Minimal |
| | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| [Adenoma TGLS = 1-9] | | | |
| * Thymus | | Atrophy | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 196

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-196

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Hyperplasia	Focal, Moderate
* Brain		Compression	Mild
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Mixed Cell Focus	Mild
[Mixed Cell Focus TGLS = 3-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 4-3]			
* Preputial Gland		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
[Depletion Cellular TGLS = 2-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-13]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 197

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-197

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Epididymis		Hypospermia	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Inflammation	Minimal
Lymph Node	Mediastinal	Hemorrhage	Moderate
[Hemorrhage TGLS = 4-13]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-17]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 3-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-16]			
* Thymus		Atrophy	Mild
* Urinary Bladder		Dilatation	Mild
[Dilatation TGLS = 5-7]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 198

TRT#: 7

SEX: Male

DAY ON TEST: 537

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-198

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Blood Vessel | * Bone | * Brain | * Epididymis |
| * Esophagus | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Lymph Node, Mesenteric | * Mammary Gland | * Pancreas | * Parathyroid Gland |
| * Preputial 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 | |
| * Heart | | Leukemia Mononuclear | |
| * Kidney | | Pigmentation | Mild |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-2] | | | |
| * Nose | Olfactory Epi | Atrophy | Focal, Moderate |
| | Olfactory Epi | Cytoplasmic Alteration | Mild |
| | Olfactory Epi | Necrosis | Focal, Minimal |
| * Pituitary Gland | | Leukemia Mononuclear | |
| * Seminal Vesicle | | Depletion Cellular | Moderate |
| * Spleen | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-5] | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| [Adenoma TGLS = 2,3-9] | | | |
| * Thymus | | Atrophy | Marked |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 199

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-199

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Hyperplasia	Minimal
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Leukemia Mononuclear	
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Nervosa	Developmental Malformation	Mild
	[Angiectasis TGLS = 4-3]		
* Prostate		Hyperplasia	Focal, Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-14,2-5,13]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 200	TRT#: 7	SEX: Male	DAY ON TEST: 731
	DOSE: 1600 PPM	DISP: Natural Death	HISTO: MB070G-200

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Glandular		Necrosis	Mild
		Ulcer	Moderate
[Ulcer TGLS = 5-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 201

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-201

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Trachea

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	[Basophilic Focus TGLS = 3-5]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Fibrosis	Mild
* Nose		Inflammation	Minimal
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin		Keratoacanthoma	
	[Keratoacanthoma TGLS = 1-13]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 4-9]		
* Thymus		Atrophy	Moderate
* Thyroid Gland	Bilateral, C Cell	Adenoma	
	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 201

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-201

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 202

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-202

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

Harderian Gland

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Inflammation	Chronic, Focal, Mild
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Prostate		Inflammation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 203

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-203

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-13,1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Atrophy	Moderate
* Thyroid Gland	Follicle	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 204

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-204

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Parathyroid Gland |
| * Preputial Gland | * Salivary Glands | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | |

OBSERVATIONS

- | | | | |
|--------------------------|---------------|-------------------------------------|----------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| | | Basophilic Focus | Minimal |
| | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 5-5] | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 8-2] | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 8-2] | |
| * Mammary Gland | | Leukemia Mononuclear | |
| Mesentery | Fat | Necrosis | Moderate |
| | | [Necrosis TGLS = 9-14] | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| | | Leukemia Mononuclear | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| | | Leukemia Mononuclear | |
| * Pituitary Gland | Pars Distalis | Cyst | Mild |
| | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 204

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-204

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 7-3]

[Leukemia Mononuclear TGLS = 7-3]

* Prostate

Hyperplasia

Focal, Minimal

* Seminal Vesicle

Depletion Cellular

Marked

[Depletion Cellular TGLS = 2-15]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-5,13]

* Testes

Bilateral, Interstit Cell

Adenoma

Leukemia Mononuclear

[Adenoma TGLS = 3,4-9]

* Thymus

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 205

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-205

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Mammary Gland	* Preputial Gland
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OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Minimal
		Infiltration Cellular	Histiocyte, Focal, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 2-9]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 206

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-206

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mesenteric	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
[Basophilic Focus TGLS = 5-15]			
* Lung		Infiltration Cellular	Histiocyte, Focal, Minimal
Lymph Node	Mediastinal	Pigmentation	Mild
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
[Hyperplasia TGLS = 7-2]			
* Mammary Gland		Lactation	Mild
		Pigmentation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Hyperplasia	Moderate
		Inflammation	Mild
[Hyperplasia TGLS = 1-10]			
[Inflammation TGLS = 1-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 206

TRT#: 7
DOSE: 1600 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: MB070G-206

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes
[Adenoma TGLS = 2,3-9]

Bilateral, Interstit Cell

Adenoma

* Thymus

Atrophy

Moderate

* Urinary Bladder

Dilatation

Moderate

[Dilatation TGLS = 8-16]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 207

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-207

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Eosinophilic Focus	Moderate
		Hepatocellular Adenoma	
		Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
[Hepatocellular Adenoma TGLS = 6-13]			
[Hyperplasia TGLS = 7-16]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		Pigmentation	Moderate
[Pigmentation TGLS = 5-8]			
* Mammary Gland		Pigmentation	Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 1-17]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 207	TRT#: 7	SEX: Male	DAY ON TEST: 732
	DOSE: 1600 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-207

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose		Leukemia Mononuclear	
* Pancreas		Ectopic Liver	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
		Leukemia Mononuclear	
	[Cyst TGLS = 8-3]		
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
	[Fibrosis TGLS = 4-15]		
	[Leukemia Mononuclear TGLS = 3-14,15]		
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 2-9]		
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 208

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-208

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mesenteric	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Mammary Gland	* Parathyroid Gland	* Skin
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OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-14]			
* Nose	Olfactory Epi	Atrophy	Focal, Minimal
	Olfactory Epi	Cytoplasmic Alteration	Moderate
Penis		Hemorrhage	Moderate
[Hemorrhage TGLS = 1-13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 209

TRT#: 7

SEX: Male

DAY ON TEST: 705

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-209

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Skin	* Thyroid Gland	* Trachea	

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-6]			
Lymph Node	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-13,12-8,14,9-16,6-15,4-17,10-13,12-8,14,9-16,6-]			
[Leukemia Mononuclear TGLS = 10-13,12-8,14,9-16,6-15,4-17,10-13,12-8,14,9-16,6-]			
[Leukemia Mononuclear TGLS = 10-13,12-8,14,9-16,6-15,4-17,10-13,12-8,14,9-16,6-]			
[Leukemia Mononuclear TGLS = 10-13,12-8,14,9-16,6-15,4-17,10-13,12-8,14,9-16,6-]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-13,12-8,14,9-16,6-15,4-17]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 209	TRT#: 7	SEX: Male	DAY ON TEST: 705
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-209

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 10-13,12-8,14,9-16,6-15,4-17]			
* Nose		Angiectasis	Marked
	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7,8-5]			
* Stomach, Forestomach		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Stomach, Glandular		Necrosis	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1,2,3-9]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:54

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 210

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-210

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Blood Vessel | * Bone | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Pituitary Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Skin | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

MISSING

- * Parathyroid Gland

OBSERVATIONS

- | | | | |
|--------------------------------------|---------------|------------------------|------------------|
| * Adrenal Cortex | | Angiectasis | Minimal |
| | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Hemorrhage | Mild |
| [Hemorrhage TGLS = 4-1] | | | |
| Ear | Pinna | Schwannoma Malignant | |
| [Schwannoma Malignant TGLS = 1-13] | | | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Cardiomyopathy | Moderate |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Minimal |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| | | Schwannoma Malignant | Metastatic (Ear) |
| [Schwannoma Malignant TGLS = 6-15] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Pancreas | Acinar Cell | Atrophy | Marked |
| | | Leukemia Mononuclear | |
| * Seminal Vesicle | | Depletion Cellular | Moderate |
| * Spleen | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 210	TRT#: 7	SEX: Male	DAY ON TEST: 732
	DOSE: 1600 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-210

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3-5]			
* Stomach, Forestomach		Hyperplasia Leukemia Mononuclear	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-9,2-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 211

TRT#: 7

SEX: Male

DAY ON TEST: 705

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-211

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Small, Ileum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Trachea	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Pigmentation	Moderate
* Intestine Large, Rectum		Pigmentation	Mild
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-13,4-14,2-13,4-14]		
	[Leukemia Mononuclear TGLS = 2-13,4-14,2-13,4-14]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-13,4-14]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-13,4-14]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:54
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 211	TRT#: 7	SEX: Male	DAY ON TEST: 705
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-211

ORGAN AND ACCOUNTABLE SITE STATUS

* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Inflammation	Mild
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5,8-5]		
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 7-9,6-9]		
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 212

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-212

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney	Renal Tubule	Carcinoma	
		Nephropathy	Chronic, Mild
[Carcinoma TGLS = 5-14]			
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
		Necrosis	Mild
Mesentery	Fat		
[Necrosis TGLS = 4-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Preputial Gland		Ectasia	Mild
[Ectasia TGLS = 1-10]			
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 213

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-213

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

Eye	Lens	Cataract	Moderate
[Cataract TGLS = 3-13]			
* Intestine Large, Colon		Polyp Adenomatous	
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIGANOSIS SITE NOT SPECIFIED.			
[Polyp Adenomatous TGLS = 2-14]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
	Olfactory Epi	Hyperplasia	Focal, Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-9]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 214

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-214

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Moderate
		Leukemia Mononuclear	
[Hemorrhage TGLS = 10-3]			
[Leukemia Mononuclear TGLS = 10-3]			
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Moderate
[Leukemia Mononuclear TGLS = 11-7]			
[Nephropathy TGLS = 11-7]			
* Liver		Fatty Change	Mild
		Leukemia Mononuclear	
[Fatty Change TGLS = 6-13]			
[Leukemia Mononuclear TGLS = 7,8,9-5,13,14]			
* Lung		Inflammation	Minimal
		Leukemia Mononuclear	
Lymph Node	Lumbar	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Lumbar	Pigmentation	Marked
[Leukemia Mononuclear TGLS = 12-18,4-17,2-16,12-18,4-17,2-16,12-18,4-17,2-16]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 214

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-214

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 12-18,4-17,2-16,12-18,4-17,2-16,12-18,4-17,2-16]

[Leukemia Mononuclear TGLS = 12-18,4-17,2-16,12-18,4-17,2-16,12-18,4-17,2-16]

[Pigmentation TGLS = 12-18]

* Lymph Node, Mandibular

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 12-18,4-17,2-16]

* Nose

Olfactory Epi

Cytoplasmic Alteration

Moderate

* Pancreas

Acinar Cell

Atrophy

Mild

Leukemia Mononuclear

* Pituitary Gland

Leukemia Mononuclear

* Preputial Gland

Hyperplasia

Moderate

[Hyperplasia TGLS = 1-10]

* Seminal Vesicle

Depletion Cellular

Moderate

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-15]

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 5-9]

* Thymus

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 215

TRT#: 7

SEX: Male

DAY ON TEST: 594

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-215

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Mild
	[Thrombosis TGLS = 7-14]		
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-5]		
* Lung		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 8-3]		
* Preputial Gland		Ectasia	Moderate
	[Ectasia TGLS = 2-10]		
* Seminal Vesicle		Depletion Cellular	Mild
* Skin		Keratoacanthoma	
	[Keratoacanthoma TGLS = 1-13]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 3,4-9]		
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 216

TRT#: 7

SEX: Male

DAY ON TEST: 701

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-216

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lymph Node, Mesenteric |
| * Mammary Gland | * Pancreas | * Parathyroid Gland | * Prostate |
| * Salivary Glands | * Skin | * Stomach, Forestomach | * Stomach, Glandular |
| * Thyroid Gland | * Trachea | | |

OBSERVATIONS

- | | | | |
|--------------------------------------|---------------|------------------------|------------------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| Ear | | Schwannoma Malignant | |
| [Schwannoma Malignant TGLS = 1-15] | | | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-6] | | Schwannoma Malignant | Metastatic (Ear) |
| [Schwannoma Malignant TGLS = 8-13] | | | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| Mesentery | Fat | Necrosis | Mild |
| [Necrosis TGLS = 9-16] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| | | Leukemia Mononuclear | |
| * Pituitary Gland | | Leukemia Mononuclear | |
| * Preputial Gland | | Hyperplasia | Mild |
| | | Inflammation | Moderate |
| [Hyperplasia TGLS = 3-10] | | | |
| [Inflammation TGLS = 3-10] | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 216

TRT#: 7

SEX: Male

DAY ON TEST: 701

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-216

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5,6-9]		Leukemia Mononuclear	
* Thymus		Atrophy	Marked
		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 217

TRT#: 7

SEX: Male

DAY ON TEST: 383

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-217

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Intestine Small, Duodenum		Sarcoma	Metastatic (Mesentery)
* Kidney		Sarcoma	Metastatic (Mesentery)
[Sarcoma TGLS = 7-7]			
* Liver		Sarcoma	Metastatic (Mesentery)
[Sarcoma TGLS = 3-5,4-13]			
* Lung		Sarcoma	Metastatic (Mesentery)
Lymph Node	Mediastinal	Sarcoma	Metastatic (Mesentery)
Mesentery		Sarcoma	
[Sarcoma TGLS = 6-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Edema	Focal, Mild
	Olfactory Epi	Necrosis	Focal, Mild
* Pancreas		Sarcoma	Metastatic (Mesentery)
[Sarcoma TGLS = 8-2,8]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Seminal Vesicle		Sarcoma	Metastatic (Mesentery)
Skeletal Muscle	Abdominal	Sarcoma	Metastatic (Mesentery)
[Sarcoma TGLS = 1-14]			
* Spleen		Sarcoma	Metastatic (Mesentery)
* Stomach, Forestomach		Sarcoma	Metastatic (Mesentery)
[Sarcoma TGLS = 5-4,16]			
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 217

TRT#: 7

SEX: Male

DAY ON TEST: 383

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-217

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 218

TRT#: 7

SEX: Male

DAY ON TEST: 659

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-218

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Blood Vessel | * Bone | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Pancreas |
| * Parathyroid Gland | * Prostate | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Trachea | |

MISSING

- * Thymus

OBSERVATIONS

- | | | | |
|--------------------------|--|------------------------|---------------|
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Leukemia Mononuclear | |
| * Epididymis | | Hypospermia | Marked |
| * Heart | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 7-5,13] | | |
| * Lung | | Leukemia Mononuclear | |
| Lymph Node | Mediastinal | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 5-14,8-8] | | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 5-14,8-8] | | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| | [Leukemia Mononuclear TGLS = 5-14,8-8] | | |
| * Mammary Gland | | Pigmentation | Mild |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| | | Fungus | Mild |
| | | Inflammation | Mild |
| | | Leukemia Mononuclear | |
| * Pituitary Gland | Pars Distalis | Adenoma | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 218

TRT#: 7

SEX: Male

DAY ON TEST: 659

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-218

ORGAN AND ACCOUNTABLE SITE STATUS

* Preputial Gland		Leukemia Mononuclear Hyperplasia Inflammation	Moderate Mild
[Hyperplasia TGLS = 1-10]			
[Inflammation TGLS = 1-10]			
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-9]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 6-2]			
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 219

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-219

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Hyperplasia	Focal, Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Mild
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 2-13]			
* Lung		Inflammation	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Seminal Vesicle		Depletion Cellular	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 220

TRT#: 7

SEX: Male

DAY ON TEST: 455

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-220

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Liver |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|----------|---------------------------|------------------------|------------------|
| * Heart | | Cardiomyopathy | Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | [Adenoma TGLS = 1,2-9] | | |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 221

TRT#: 7

SEX: Male

DAY ON TEST: 729

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-221

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea			

MISSING

* Mammary Gland	* Urinary Bladder
-----------------	-------------------

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-6]		
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Thrombosis	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-13]		
* Stomach, Forestomach		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 221	TRT#: 7	SEX: Male	DAY ON TEST: 729
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-221

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Glandular [Ulcer TGLS = 8-4]		Leukemia Mononuclear Ulcer	Mild
* Testes [Adenoma TGLS = 6-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Atrophy	Marked

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 222

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-222

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Moderate
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	

[Adenoma TGLS = 1-13]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 223

TRT#: 7

SEX: Male

DAY ON TEST: 550

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-223

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* 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	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-9]			
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 224

TRT#: 7

SEX: Male

DAY ON TEST: 670

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-224

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Thyroid Gland	* Trachea	

MISSING

* Thymus

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-6]			
Lymph Node	Axillary	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-8,11-14,7-13,8,9-16,5-15,6-17,1-2,12-8,11-14,7-]			
[Leukemia Mononuclear TGLS = 12-8,11-14,7-13,8,9-16,5-15,6-17,1-2,12-8,11-14,7-]			
[Leukemia Mononuclear TGLS = 12-8,11-14,7-13,8,9-16,5-15,6-17,1-2,12-8,11-14,7-]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 224

TRT#: 7

SEX: Male

DAY ON TEST: 670

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-224

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 12-8,11-14,7-13,8,9-16,5-15,6-17,1-2,12-8,11-14,7-]			
[Leukemia Mononuclear TGLS = 12-8,11-14,7-13,8,9-16,5-15,6-17,1-2,12-8,11-14,7-]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-14,7-13,8,9-16,5-15,6-17,1-2,12-8]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-8,11-14,7-13,8,9-16,5-15,6-17,1-2]			
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2,3-9]			
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 225

TRT#: 7

SEX: Male

DAY ON TEST: 355

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-225

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Epididymis	* Esophagus
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-14]			
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Acute, Moderate
		Leukemia Mononuclear	
[Inflammation TGLS = 8-11]			
* Pituitary Gland		Leukemia Mononuclear	
Spinal Cord		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10,11,12-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 225

TRT#: 7

SEX: Male

DAY ON TEST: 355

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-225

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach

Leukemia Mononuclear

* Stomach, Glandular

Leukemia Mononuclear

* Testes

Interstit Cell

Hyperplasia

Focal, Mild

* Thymus

Atrophy

Moderate

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-3]

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 226

TRT#: 7

SEX: Male

DAY ON TEST: 715

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-226

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Preputial Gland	* Prostate	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow	Myeloid Cell	Atrophy	Marked
	Erythroid Cell	Hyperplasia	Mild
* Epididymis		Hypospermia	Marked
* Kidney		Infiltration Cellular	Lymphocyte, Mild
		Nephropathy	Chronic, Minimal
* Liver		Abscess	Marked
		Degeneration	Mild
		Infiltration Cellular	Lymphocyte, Moderate
		Leukocytosis	Mild
		Necrosis	Mild
[Abscess TGLS = 17-20]			
[Degeneration TGLS = 18-5,16-5]			
[Infiltration Cellular TGLS = 18-5]			
[Leukocytosis TGLS = 18-5]			
[Necrosis TGLS = 18-5,16-5]			
* Lung		Inflammation	Minimal
Lymph Node	Mediastinal	Hemorrhage	Mild
	Lymphocyte, Pancreatic	Hyperplasia	Moderate
[Hemorrhage TGLS = 19-18]			
[Hyperplasia TGLS = 14-14]			
* Lymph Node, Mandibular	Lymphocyte	Hyperplasia	Mild
[Hyperplasia TGLS = 14-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 226	TRT#: 7 DOSE: 1600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 715 HISTO: MB070G-226
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ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Hyperplasia TGLS = 14-14]	Lymphocyte	Hyperplasia	Mild
* Mammary Gland [Pigmentation TGLS = 4-8]		Pigmentation	Mild
Mesentery [Necrosis TGLS = 15-17,13-15]	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas		Infiltration Cellular	Lymphocyte, Mild
* Parathyroid Gland		Carcinoma	Metastatic (Thyroid Gland)
* Pituitary Gland [Adenoma TGLS = 22-3]	Pars Distalis	Adenoma	
* Seminal Vesicle [Depletion Cellular TGLS = 10-13]		Depletion Cellular	Marked
* Skin Note: THE INFLAMMATION IS PRESENT AROUND Note: THE MANDIBULAR LYMPH NODES. [Inflammation TGLS = 3-19]	Subcut Tiss	Inflammation	Moderate
* Spleen [Hematopoietic Cell Proliferation TGLS = 11-5] [Hyperplasia TGLS = 11-5]	Lymphocyte	Hematopoietic Cell Proliferation Hyperplasia	Mild Mild
* Testes [Adenoma TGLS = 6,7,8,9-9]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Infiltration Cellular	Lymphocyte, Mild
* Thyroid Gland [Carcinoma TGLS = 21-2]	C Cell	Carcinoma	
Tissue NOS [Infiltration Cellular TGLS = 19-18]	Mediastinum	Infiltration Cellular	Lymphocyte, Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 227

TRT#: 7

SEX: Male

DAY ON TEST: 659

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-227

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Parathyroid Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Esophagus		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-6]			
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14,2-2]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14,2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14,2-2]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 227	TRT#: 7	SEX: Male	DAY ON TEST: 659
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-227

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Hyperplasia	Mild
	[Hyperplasia TGLS = 3-10]		
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 9-5]		
* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 7,8-9]		
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 228

TRT#: 7

SEX: Male

DAY ON TEST: 530

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-228

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Myelofibrosis	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
		Thrombosis	Moderate
* Mammary Gland		Lactation	Mild
		Pigmentation	Mild
[Lactation TGLS = 1-8]			
[Pigmentation TGLS = 1-8]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Seminal Vesicle		Depletion Cellular	Marked
[Depletion Cellular TGLS = 5-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 7-9]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 229

TRT#: 7

SEX: Male

DAY ON TEST: 559

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-229

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Rectum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-3]			
* Epididymis		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-9]			
* Intestine Large, Cecum		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-8,2-4]			
* Intestine Large, Colon		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-8,2-4]			
* Intestine Small, Duodenum		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-4,2-8]			
* Intestine Small, Ileum		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-4,2-8]			
* Intestine Small, Jejunum		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-4,2-8]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-8]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 229

TRT#: 7

SEX: Male

DAY ON TEST: 559

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-229

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas [Mesothelioma Malignant TGLS = 2-2]		Mesothelioma Malignant	
* Prostate [Mesothelioma Malignant TGLS = 2-10]		Mesothelioma Malignant	
* Seminal Vesicle [Mesothelioma Malignant TGLS = 2-10]		Depletion Cellular Mesothelioma Malignant	Moderate
* Spleen [Leukemia Mononuclear TGLS = 5-5] [Mesothelioma Malignant TGLS = 2-5]		Leukemia Mononuclear Mesothelioma Malignant	
* Stomach, Forestomach [Mesothelioma Malignant TGLS = 2-4]		Mesothelioma Malignant	
* Stomach, Glandular [Mesothelioma Malignant TGLS = 2-4]		Mesothelioma Malignant	
* Testes [Adenoma TGLS = 3,4-9] [Mesothelioma Malignant TGLS = 2-9]	Bilateral, Interstit Cell	Adenoma Mesothelioma Malignant	
* Urinary Bladder [Mesothelioma Malignant TGLS = 2-7]		Mesothelioma Malignant	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 230

TRT#: 7

SEX: Male

DAY ON TEST: 544

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-230

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum	* Intestine Small, Jejunum
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OBSERVATIONS

* Bone	Rib	Osteosarcoma	
[Osteosarcoma TGLS = 6-13]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Respirat Epith	Cytoplasmic Alteration	Focal, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-10]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3,4-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			
* Thymus		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 231

TRT#: 7

SEX: Male

DAY ON TEST: 683

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-231

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
Lymph Node	Axillary	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,6-15,9-16,8-8,10-14,13-18,12-17,1-2,6-15,9-16,]		
	[Leukemia Mononuclear TGLS = 1-2,6-15,9-16,8-8,10-14,13-18,12-17,1-2,6-15,9-16,]		
	[Leukemia Mononuclear TGLS = 1-2,6-15,9-16,8-8,10-14,13-18,12-17,1-2,6-15,9-16,]		
	[Leukemia Mononuclear TGLS = 1-2,6-15,9-16,8-8,10-14,13-18,12-17,1-2,6-15,9-16,]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,6-15,9-16,8-8,10-14,13-18,12-17]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,6-15,9-16,8-8,10-14,13-18,12-17]		
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 231	TRT#: 7	SEX: Male	DAY ON TEST: 683
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-231

ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate		Leukemia Mononuclear
* Seminal Vesicle		Leukemia Mononuclear
* Spleen		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 7-5]		
* Testes	Bilateral, Interstit Cell	Adenoma
[Adenoma TGLS = 2,3,4,5-9]		Leukemia Mononuclear
* Thymus		Leukemia Mononuclear
* Thyroid Gland	C Cell	Carcinoma
[Carcinoma TGLS = 11-13]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 232

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-232

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Pituitary Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Preputial Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 2-10]			
* Prostate		Inflammation	Mild
* Seminal Vesicle		Depletion Cellular	Moderate
* Skin	Tail	Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 1-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-9]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 233

TRT#: 7

SEX: Male

DAY ON TEST: 484

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-233

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Mammary Gland	* Pituitary Gland	* Preputial Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea

MISSING

* Epididymis	* Parathyroid Gland
--------------	---------------------

OBSERVATIONS

* Adrenal Cortex		Mesothelioma Malignant	
* Epididymis			
Note: THE EPIDIDYMIS WAS COMPLETELY EFFACED			
Note: BY THE MESOTHELIOMA.			
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Mesothelioma Malignant	
* Intestine Large, Colon		Mesothelioma Malignant	
* Intestine Large, Rectum		Mesothelioma Malignant	
* Kidney		Mesothelioma Malignant	
		Pigmentation	Moderate
* Liver		Mesothelioma Malignant	
* Lung			
Note: ARE "FLOATERS". (ARTIFACTS)			
Note: TWO PIECES OF MESOTHELIOMA ADJACENT TO THE LUNG			
* Lymph Node, Mesenteric		Mesothelioma Malignant	
Mesentery		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas		Mesothelioma Malignant	
* Prostate		Mesothelioma Malignant	
* Seminal Vesicle		Mesothelioma Malignant	
* Spleen		Mesothelioma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 233

TRT#: 7

SEX: Male

DAY ON TEST: 484

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-233

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach

* Testes

* Thymus

* Urinary Bladder

Bilateral, Interstit Cell

Mesothelioma Malignant

Adenoma

Mesothelioma Malignant

Atrophy

Mesothelioma Malignant

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 234

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-234

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Clear Cell Focus	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Ectasia	Moderate
		Hyperplasia	Moderate
[Ectasia TGLS = 1-10]			
[Hyperplasia TGLS = 1-10]			
* Seminal Vesicle		Depletion Cellular	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 235

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-235

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Inflammation	Mild
		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
Mesentery		Leukemia Mononuclear	
	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-14,5-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Preputial Gland		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 235	TRT#: 7	SEX: Male	DAY ON TEST: 733
	DOSE: 1600 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-235

ORGAN AND ACCOUNTABLE SITE STATUS

* Seminal Vesicle		Depletion Cellular	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-9]		Leukemia Mononuclear	
* Thymus		Atrophy	Mild
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 236

TRT#: 7

SEX: Male

DAY ON TEST: 670

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-236

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Rectum	* Islets, Pancreatic
* Parathyroid Gland	* Prostate	* Stomach, Forestomach	* Trachea

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-14,1-2,5-8]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-14,1-2,5-8]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-14,1-2,5-8]		
* Mammary Gland		Leukemia Mononuclear	
Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Moderate
	[Leukemia Mononuclear TGLS = 4-13]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 236

TRT#: 7

SEX: Male

DAY ON TEST: 670

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-236

ORGAN AND ACCOUNTABLE SITE STATUS

[Necrosis TGLS = 4-13]

* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Inflammation	Moderate
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Skin	Subcut Tiss	Fibroma	
		Leukemia Mononuclear	

[Fibroma TGLS = 2-15]

* Spleen		Leukemia Mononuclear	
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[Leukemia Mononuclear TGLS = 6-5]

* Stomach, Glandular		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	

[Adenoma TGLS = 7,8-9]

* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 237

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-237

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Preputial Gland		Adenoma	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-5,13]	
* Testes	Bilateral, Interstit Cell	Adenoma	
		[Adenoma TGLS = 2-9]	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 238

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-238

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
* Lung		Inflammation	Mild
		Leukemia Mononuclear	
Lymph Node	Axillary	Leukemia Mononuclear	
	Deep Cervical	Leukemia Mononuclear	
	Lumbar	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15,8-16,6-22,]	
		[Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15,8-16,6-22,]	
		[Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15,8-16,6-22,]	
		[Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15,8-16,6-22,]	
		[Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15,8-16,6-22,]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 238

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-238

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 8-16,6-22,1-13,4-20,2-17,3-18,1-13,7-15]		Leukemia Mononuclear	
Mesentery	Fat	Leukemia Mononuclear	
	Fat	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 9-19]			
[Necrosis TGLS = 9-19]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5,14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 10-9]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 239

TRT#: 7

SEX: Male

DAY ON TEST: 732

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-239

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Prostate	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Hypospermia	Marked
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
Lymph Node	Lumbar	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-14]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-14]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Preputial Gland		Hyperplasia	Moderate
		[Hyperplasia TGLS = 1-10]	
* Seminal Vesicle		Depletion Cellular	Moderate
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 240

TRT#: 7

SEX: Male

DAY ON TEST: 603

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-240

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart	Cerebellum	Necrosis	Focal, Mild
		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Leukemia Mononuclear	
* Liver		Nephropathy	Chronic, Mild
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Seminal Vesicle		Depletion Cellular	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 240

TRT#: 7
DOSE: 1600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 603
HISTO: MB070G-240

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 1,2-9]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 241

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 475
HISTO: MB070G-241

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain		Astrocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Inflammation	Minimal
[Basophilic Focus TGLS = 2-5]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	
	Follicular Cel	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 242

TRT#: 2

SEX: Female

DAY ON TEST: 456

DOSE: 0 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-242

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Kidney | * 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

- | | | | |
|-------------------|---------------|------------------------|---------------------|
| * Liver | | Basophilic Focus | Mild |
| * Lung | | Infiltration Cellular | Histiocyte, Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 243

TRT#: 2

SEX: Female

DAY ON TEST: 736

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-243

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow	Erythroid Cell	Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Fatty Change	Moderate
Lymph Node	Mediastinal	Hemorrhage	Moderate
[Hemorrhage TGLS = 1-12]			
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Granulosa-Theca Tumor Malignant	
[Granulosa-Theca Tumor Malignant TGLS = 2-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 3-3]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 244

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: MB070G-244

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Clear Cell Focus	Minimal
[Basophilic Focus TGLS = 4-5,13]			
Lymph Node	Mediastinal	Hemorrhage	Mild
	Mediastinal	Pigmentation	Mild
[Hemorrhage TGLS = 1-12]			
[Pigmentation TGLS = 1-12]			
* Mammary Gland		Hyperplasia	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Luteoma	
[Luteoma TGLS = 5-9]			
* Pancreas	Acinar Cell	Hyperplasia	Minimal
		Infiltration Cellular	Lymphocyte, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 3-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Carcinoma	
	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 244

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: MB070G-244

ORGAN AND ACCOUNTABLE SITE STATUS

[Carcinoma TGLS = 2-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 245	TRT#: 2	SEX: Female	DAY ON TEST: 456
	DOSE: 0 PPM	DISP: Scheduled Sacrifice	HISTO: MB070G-245

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Mild
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 1-9]			
* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 246

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Natural Death

DAY ON TEST: 581
HISTO: MB070G-246

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Hyperplasia	Mild
		Lactation	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
		Leukemia Mononuclear	
[Angiectasis TGLS = 5-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-12]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 247

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: MB070G-247

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Clitoral Gland		Adenoma	
		Hyperplasia	Mild
	[Adenoma TGLS = 1-14]		
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Fatty Change	Mild
		Inflammation	Mild
	[Fatty Change TGLS = 3-13]		
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 2-12,15]		
* Ovary		Cyst	Mild
	[Cyst TGLS = 4-9]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 5-3]		
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 248

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Natural Death

DAY ON TEST: 725
HISTO: MB070G-248

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Parathyroid Gland	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Pituitary Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear Vacuolization Cytoplasmic	Focal, Mild
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 5-9]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5,12]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma Lactation	Mild
[Fibroadenoma TGLS = 3-14]		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Moderate
* Ovary		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-9]			
* Pancreas		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 248

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 725

HISTO: MB070G-248

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen
[Leukemia Mononuclear TGLS = 1-13]

Leukemia Mononuclear

* Thymus

Leukemia Mononuclear

Thymoma Benign

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 249

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 736
HISTO: MB070G-249

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Mammary Gland [Fibroadenoma TGLS = 1-9,2-12]		Fibroadenoma	Multiple
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland [Angiectasis TGLS = 5-3]	Pars Distalis	Angiectasis	Moderate
* Uterus [Hemorrhage TGLS = 4-9]		Dilatation	Mild
		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 250

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 631
HISTO: MB070G-250

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Moderate
		Clear Cell Focus	Minimal
* Lung		Inflammation	Mild
* Lymph Node, Mesenteric		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Cyst TGLS = 2-3]			
[Hyperplasia TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 251

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: MB070G-251

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Developmental Malformation	Mild
	[Developmental Malformation TGLS = 3-12]		
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Adenocarcinoma	
		Galactocele	Moderate
	[Adenocarcinoma TGLS = 2-14]		
	[Galactocele TGLS = 1-13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 4-3]		
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 252

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 712
HISTO: MB070G-252

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular	* Pituitary Gland
--------------------------	-------------------

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow	Erythroid Cell	Atrophy	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Degeneration	Moderate
		Fatty Change	Mild
[Degeneration TGLS = 2-5]			
[Fatty Change TGLS = 2-5]			
* Lung		Leukocytosis	Mild
Lymph Node	Mediastinal	Hemorrhage	Mild
[Hemorrhage TGLS = 3-12]			
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Mild
[Fibroadenoma TGLS = 6-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Mild
* Spleen		Congestion	Mild
		Depletion Lymphoid	Moderate
* Stomach, Forestomach		Hyperplasia	Mild
		Ulcer	Marked
[Hyperplasia TGLS = 5-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 252

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 712
HISTO: MB070G-252

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 5-13]

* Thymus

* Thyroid Gland

[Carcinoma TGLS = 4-2]

C Cell

Atrophy
Carcinoma

Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 253

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: MB070G-253

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 2,3-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
[Leukemia Mononuclear TGLS = 5-5]		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-14]		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Angiectasis TGLS = 7-3]	Pars Distalis	Angiectasis	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]		Leukemia Mononuclear	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 254

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Scheduled Sacrifice

DAY ON TEST: 456

HISTO: MB070G-254

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Kidney
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Liver		Basophilic Focus	Minimal
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Fungus	Mild
		Inflammation	Mild
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 255

TRT#: 2

SEX: Female

DAY ON TEST: 581

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-255

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic | * 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

- | | | | |
|-------------------|---------------|---------------------------|-------------|
| * Adrenal Cortex | | Vacuolization Cytoplasmic | Focal, Mild |
| * Bone | Femur | Hyperostosis | Mild |
| * Kidney | | Mineralization | Minimal |
| * Liver | | Fatty Change | Mild |
| * Lung | | Inflammation | Moderate |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Mild |
| * Thymus | | Atrophy | Moderate |
| | | Congestion | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 256

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Scheduled Sacrifice

DAY ON TEST: 456
HISTO: MB070G-256

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* 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			

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Pituitary Gland [Hyperplasia TGLS = 2-3]	Pars Distalis	Hyperplasia	Focal, Moderate
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 257

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: MB070G-257

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney		Infarct	Mild
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
[Adenoma TGLS = 2-3]			
[Angiectasis TGLS = 2-3]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 258

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-258

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Medulla [Pheochromocytoma Malignant TGLS = 2-13]		Pheochromocytoma Malignant	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Inflammation	Minimal
* Mammary Gland [Fibroadenoma TGLS = 1-14]		Fibroadenoma	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland [Cyst TGLS = 3-3]	Pars Distalis	Cyst	Moderate
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 259

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Scheduled Sacrifice

DAY ON TEST: 456
HISTO: MB070G-259

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* 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

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 260

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Scheduled Sacrifice

DAY ON TEST: 456
HISTO: MB070G-260

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
[Basophilic Focus TGLS = 1-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 261

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 673

HISTO: MB070G-261

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Blood Vessel | * Bone | * Brain | * Esophagus |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Stomach, Forestomach | * Stomach, Glandular |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- | | |
|------------------|-------------------|
| * Clitoral Gland | * Pituitary Gland |
|------------------|-------------------|

OBSERVATIONS

- | | | |
|--|---------------------------|------------------|
| * Adrenal Cortex | Leukemia Mononuclear | |
| | Vacuolization Cytoplasmic | Focal, Mild |
| * Adrenal Medulla | Hyperplasia | Mild |
| | Leukemia Mononuclear | |
| * Bone Marrow | Leukemia Mononuclear | |
| * Heart | Leukemia Mononuclear | |
| * Kidney | Leukemia Mononuclear | |
| | Nephropathy | Chronic, Minimal |
| [Leukemia Mononuclear TGLS = 2-7] | | |
| * Liver | Basophilic Focus | Mild |
| | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-5] | | |
| * Lung | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-6] | | |
| Lymph Node | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12-12,5-8,11-2] | | |
| * Lymph Node, Mandibular | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12-12,5-8,11-2] | | |
| * Lymph Node, Mesenteric | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12-12,5-8,11-2] | | |
| * Mammary Gland | Fibroadenoma | Multiple |
| [Fibroadenoma TGLS = 7-13,8,9-14,10-15] | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 261	TRT#: 2 DOSE: 0 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 673 HISTO: MB070G-261
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ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Minimal
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy Leukemia Mononuclear	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Thymus		Atrophy Leukemia Mononuclear	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 262

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 587
HISTO: MB070G-262

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland [Carcinoma TGLS = 1-12]		Carcinoma	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Inflammation	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland [Lactation TGLS = 2-13]		Lactation	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland [Hyperplasia TGLS = 3-3]	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 263

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Scheduled Sacrifice

DAY ON TEST: 456
HISTO: MB070G-263

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* 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

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
	Bile Duct	Hyperplasia	Focal, Moderate
[Hyperplasia TGLS = 1-5]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 264

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: MB070G-264

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-5]	
* Lung		Alveolar/Bronchiolar Carcinoma	
		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mediastinal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-13]	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-13]	
* Mammary Gland		Hyperplasia	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Moderate
		[Cyst TGLS = 2-12]	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 264

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-264

ORGAN AND ACCOUNTABLE SITE STATUS

Pars Distalis

Hyperplasia

Mild

[Angiectasis TGLS = 5-3]

[Cyst TGLS = 5-3]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-5]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 265

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 736
HISTO: MB070G-265

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone Marrow	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone	Femur	Hyperostosis	Moderate
	Turbinates	Hyperostosis	Moderate
* Brain		Compression	Mild
* Liver		Basophilic Focus	Moderate
		Necrosis	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 4-3]			
* Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 266

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Natural Death

DAY ON TEST: 313
HISTO: MB070G-266

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lung
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Thymus

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 2-9]			
* Liver		Fatty Change	Mild
Lymph Node	Iliac	Hyperplasia	Plasma Cell, Moderate
[Hyperplasia TGLS = 3-13]			
* Lymph Node, Mandibular		Infiltration Cellular	Histiocyte, Mild
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 7-3]			
* Skin	Subcut Tiss	Fibrosarcoma	
[Fibrosarcoma TGLS = 1-12]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 4-5]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 267

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: MB070G-267

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Clear Cell Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1-14,2-9]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Parathyroid Gland		Adenoma	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 4-3]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 268

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 736
HISTO: MB070G-268

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Medulla		Lymphoma Malignant	
* Bone Marrow		Lymphoma Malignant	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-9]			
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Hematopoietic Cell Proliferation	Mild
		Leukocytosis	Mild
		Lymphoma Malignant	
[Basophilic Focus TGLS = 6-5]			
* Lung		Lymphoma Malignant	
Lymph Node	Mediastinal	Lymphoma Malignant	
[Lymphoma Malignant TGLS = 8-12]			
* Lymph Node, Mandibular		Lymphoma Malignant	
[Lymphoma Malignant TGLS = 8-12]			
* Mammary Gland		Lymphoma Malignant	
[Lymphoma Malignant TGLS = 2-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 268

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 736
HISTO: MB070G-268

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland [Cyst TGLS = 7-3]	Pars Distalis	Cyst	Mild
* Skin [Lymphoma Malignant TGLS = 2-13]	Subcut Tiss	Lymphoma Malignant	
* Spleen [Lymphoma Malignant TGLS = 4-5]		Lymphoma Malignant	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 269

TRT#: 2

SEX: Female

DAY ON TEST: 432

DOSE: 0 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-269

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------|--------------------------|--------------------------|----------------------------|
| * Blood Vessel | * Bone | * Brain | * Clitoral Gland |
| * Esophagus | * Intestine Large, Colon | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic | * Parathyroid Gland | * Skin | * Thyroid Gland |
| * Trachea | * Uterus | | |

OBSERVATIONS

- | | | | |
|-------------------------------------|-------------|----------------------|---------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 5-3] | | | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 5-3] | | | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Heart | | Leukemia Mononuclear | |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| * Intestine Large, Rectum | | Leukemia Mononuclear | |
| * Intestine Small, Duodenum | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 3-5] | | | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| * Mammary Gland | | Hyperplasia | Minimal |
| [Hyperplasia TGLS = 1-8] | | | |
| * Nose | | Leukemia Mononuclear | |
| * Ovary | | Leukemia Mononuclear | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Pituitary Gland | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-3] | | | |
| * Salivary Glands | | Leukemia Mononuclear | |
| * Spleen | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-5] | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 269

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 432
HISTO: MB070G-269

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach	Hyperplasia	Minimal
	Leukemia Mononuclear	
* Stomach, Glandular	Leukemia Mononuclear	
* Thymus	Atrophy	Mild
	Leukemia Mononuclear	
* Urinary Bladder	Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 270

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Scheduled Sacrifice

DAY ON TEST: 456
HISTO: MB070G-270

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* 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

* Clitoral Gland [Inflammation TGLS = 1-9]		Inflammation	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver [Developmental Malformation TGLS = 2-5]		Basophilic Focus	Minimal
		Developmental Malformation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland [Hyperplasia TGLS = 3-3]	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 271

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 475
HISTO: MB070G-271

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large, Colon	* Islets, Pancreatic
* Parathyroid Gland	* Salivary Glands	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-3]			
* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-3]			
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 2-9]		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 5-5]		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Axillary	Leukemia Mononuclear	
	Bronchial	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-17,9-13,8-14,11-8,13-16,1-2,7-17,9-13,8-14,11-8,]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 271

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 475
HISTO: MB070G-271

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 7-17,9-13,8-14,11-8,13-16,1-2,7-17,9-13,8-14,11-8,]			
[Leukemia Mononuclear TGLS = 7-17,9-13,8-14,11-8,13-16,1-2,7-17,9-13,8-14,11-8,]			
[Leukemia Mononuclear TGLS = 7-17,9-13,8-14,11-8,13-16,1-2,7-17,9-13,8-14,11-8,]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-17,9-13,8-14,11-8,13-16,1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-17,9-13,8-14,13-16,1-2,11-8]			
* Mammary Gland		Fibroadenoma Leukemia Mononuclear	
[Fibroadenoma TGLS = 3-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Minimal
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy Leukemia Mononuclear	Mild
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-2]			
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-3]			
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 272

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: MB070G-272

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Pancreas	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Clitoral Gland	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone	Cranium	Hyperostosis	
[Hyperostosis TGLS = 5-17]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Moderate
		Hydrocephalus	Mild
Eye	Lens	Cataract	Mild
	Lens	Hyperplasia	Mild
[Cataract TGLS = 1-16]			
[Hyperplasia TGLS = 1-16]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 2-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 272	TRT#: 2 DOSE: 0 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: MB070G-272
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ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 273

TRT#: 2

SEX: Female

DAY ON TEST: 591

DOSE: 0 PPM

DISP: Natural Death

HISTO: MB070G-273

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Kidney
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Thymus

OBSERVATIONS

* Intestine Small, Jejunum [Adenocarcinoma TGLS = 1-12]		Adenocarcinoma	
* Liver		Fatty Change	Minimal
* Mammary Gland		Fibroadenoma	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Ulcer	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 274

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: MB070G-274

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
* Spleen		Leukemia Mononuclear	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 275

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: MB070G-275

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric
Oral Mucosa	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lymph Node, Mandibular		Pigmentation	Mild
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Mild
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]			
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 2-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 276

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Scheduled Sacrifice

DAY ON TEST: 456

HISTO: MB070G-276

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Thymus

OBSERVATIONS

* Liver		Basophilic Focus Hyperplasia	Minimal Focal, Mild
[Hyperplasia TGLS = 3-12]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration Inflammation	Mild Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 277

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: MB070G-277

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Intestine Small, Jejunum * Thymus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Vacuolization Cytoplasmic	Focal, Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Hematopoietic Cell Proliferation	Minimal
[Basophilic Focus TGLS = 4,5-5]			
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-13,2-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 6-3]			
[Hyperplasia TGLS = 6-3]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 3-12]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 278

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: MB070G-278

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Esophagus | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Lung | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Parathyroid Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|--|---------------|----------------------------|------------------|
| * Brain | | Compression | Mild |
| * Clitoral Gland | | Adenoma | |
| [Adenoma TGLS = 1-9] | | | |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Developmental Malformation | Mild |
| | | Fatty Change | Mild |
| [Developmental Malformation TGLS = 3-13] | | | |
| [Fatty Change TGLS = 4-12] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| * Ovary | | Cyst | Moderate |
| [Cyst TGLS = 2-9] | | | |
| * Pancreas | Acinar Cell | Atrophy | Moderate |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 5-3] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 279

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 736
HISTO: MB070G-279

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 1-14]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Lymphocyte, Minimal
Lymph Node	Mediastinal	Hemorrhage	Mild
[Hemorrhage TGLS = 3-13]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 4-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 280

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Scheduled Sacrifice

DAY ON TEST: 456

HISTO: MB070G-280

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Blood Vessel | * 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 | * Islets, Pancreatic | * Lung |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Ovary | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Parathyroid Gland

OBSERVATIONS

- | | | | |
|----------------------------|---------------|-----------------------|------------------|
| * Adrenal Medulla | | Infiltration Cellular | Lymphocyte, Mild |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Cyst | Moderate |
| | Pars Distalis | Hyperplasia | Focal, Moderate |
| [Cyst TGLS = 1-3] | | | |
| [Hyperplasia TGLS = 1-3] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 281

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-281

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung	* 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	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Brain		Carcinoma	Metastatic (Pituitary Gland)
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
[Basophilic Focus TGLS = 4-5]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Marked
[Cyst TGLS = 1-9]			
* Pituitary Gland	Pars Distalis	Carcinoma	
[Carcinoma TGLS = 5-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 282

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: MB070G-282

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Mild
* Heart	Valve	Pigmentation	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
		Infiltration Cellular	Lymphocyte, Mild
* Lung		Inflammation	Minimal
Lymph Node	Mediastinal	Pigmentation	Mild
[Pigmentation TGLS = 4-12]			
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Cyst	Marked
[Cyst TGLS = 1-9]			
* Pancreas	Acinar Cell	Atrophy	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 3-3]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 283

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-283

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 284

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 575
HISTO: MB070G-284

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3,4-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Lactation	Moderate
[Lactation TGLS = 1-8]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Stomach, Forestomach		Inflammation	Minimal
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 285

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 663
HISTO: MB070G-285

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Thymus

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Brain		Compression	Moderate
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-13]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
[Hyperplasia TGLS = 5-12]		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Adenocarcinoma	
[Adenocarcinoma TGLS = 1-14]		Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 286

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 689
HISTO: MB070G-286

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Brain		Compression	Moderate
		Hydrocephalus	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mandibular		Hemorrhage	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			
* Stomach, Forestomach		Hyperplasia	Mild
		Inflammation	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 287

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 547
HISTO: MB070G-287

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Moderate
* Pituitary Gland [Hyperplasia TGLS = 2-3]	Pars Distalis	Hyperplasia	Minimal
* Salivary Glands		Atrophy	Focal, Mild
* Skin [Fibroma TGLS = 1-12]	Subcut Tiss	Fibroma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 288

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: MB070G-288

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Moderate
	[Eosinophilic Focus TGLS = 5-5]		
* Lung		Inflammation	Minimal
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 3-14,2-13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Moderate
	[Adenoma TGLS = 6-3]		
	[Cyst TGLS = 6-3]		
* Skin		Squamous Cell Papilloma	
	[Squamous Cell Papilloma TGLS = 1-12]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 289

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 490
HISTO: MB070G-289

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* 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

* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Mild
* Lung		Infiltration Cellular	Lymphocyte, Mild
* Mammary Gland		Fibroadenoma	
		Lactation	Minimal
[Fibroadenoma TGLS = 1-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Moderate
[Angiectasis TGLS = 2-3]			
[Hyperplasia TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 290

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 736
HISTO: MB070G-290

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
		Infiltration Cellular	Lymphocyte, Moderate
* Bone	Cranium	Hyperostosis	Moderate
	Femur	Hyperostosis	Moderate
	Turbinates	Hyperostosis	Moderate
	[Hyperostosis TGLS = 5-15,5-15,5-15]		
	[Hyperostosis TGLS = 5-15,5-15,5-15]		
	[Hyperostosis TGLS = 5-15,5-15,5-15]		
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Cecum		Inflammation	Moderate
* Intestine Large, Colon		Inflammation	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Moderate
		Infiltration Cellular	Lymphocyte, Mild
		Necrosis	Mild
	[Basophilic Focus TGLS = 4-5]		
	[Infiltration Cellular TGLS = 4-5]		
	[Necrosis TGLS = 4-5]		
* Lung		Infiltration Cellular	Lymphocyte, Mild
Lymph Node	Mediastinal	Cyst	Moderate
	Mediastinal	Hemorrhage	Minimal
	[Cyst TGLS = 3-13]		
	[Hemorrhage TGLS = 3-13]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 290	TRT#: 2 DOSE: 0 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 736 HISTO: MB070G-290
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ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric		Edema	Moderate
* Mammary Gland [Fibroadenoma TGLS = 1-12]		Fibroadenoma	
Mesentery [Cyst TGLS = 7-14] [Infiltration Cellular TGLS = 7-14]	Lymphatic	Cyst Infiltration Cellular	Marked Lymphocyte, Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy Inflammation	Mild Moderate
* Pituitary Gland [Adenoma TGLS = 6-3]	Pars Distalis	Adenoma	
* Spleen [Hematopoietic Cell Proliferation TGLS = 2-5]		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 291

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: MB070G-291

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* 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
* Islets, Pancreatic	* Lymph Node, Mesenteric	Oral Mucosa	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Brain		Compression	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
		Clear Cell Focus	Minimal
		Eosinophilic Focus	Mild
[Basophilic Focus TGLS = 2-5]			
[Clear Cell Focus TGLS = 2-5]			
[Eosinophilic Focus TGLS = 2-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Mandibular		Hemorrhage	Moderate
* Mammary Gland		Lactation	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 292

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-292

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Clitoral Gland		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Clear Cell Focus	Mild
		Eosinophilic Focus	Mild
		Inflammation	Minimal
[Clear Cell Focus TGLS = 3-12]			
* Lung		Infiltration Cellular	Histiocyte, Minimal
		Inflammation	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
Oral Mucosa	Gingival	Cyst	Moderate
[Cyst TGLS = 2-13]			
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Mild
[Cyst TGLS = 4-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 293

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: MB070G-293

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* 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	* Islets, Pancreatic	* Lung	* 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

* Adrenal Cortex		Angiectasis	Moderate
* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
Lymph Node	Mediastinal	Hemorrhage	Mild
	Mediastinal	Pigmentation	Mild
[Hemorrhage TGLS = 1-12]			
[Pigmentation TGLS = 1-12]			
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 294

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 677
HISTO: MB070G-294

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Cytologic Alterations	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 2-9]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Developmental Malformation	Mild
[Developmental Malformation TGLS = 5-13]		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]		Hyperplasia	Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]			
* Spleen		Leukemia Mononuclear	
* Thymus		Atrophy	Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 294

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 677
HISTO: MB070G-294

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 295

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: 0 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-295

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Brain		Compression	Mild
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 2-9,1-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
[Basophilic Focus TGLS = 4-5,3-12]			
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Moderate
[Adenoma TGLS = 5-3]			
[Angiectasis TGLS = 5-3]			
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 296

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 586
HISTO: MB070G-296

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Nose	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear Vacuolization Cytoplasmic	Focal, Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
		Leukemia Mononuclear	
[Angiectasis TGLS = 4-3]			
[Leukemia Mononuclear TGLS = 4-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-12]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 297

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: MB070G-297

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* 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
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Pituitary Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Clitoral Gland		Ectasia	Mild
		Hyperplasia	Mild
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 5-5]		
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 1,2-12,13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Minimal
* Ovary		Cyst	Mild
	[Cyst TGLS = 3-9]		
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Dilatation	Moderate
	[Dilatation TGLS = 4-9,14]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 298

TRT#: 2

DOSE: 0 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 548

HISTO: MB070G-298

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* 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

* Clitoral Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild
		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 299

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 532
HISTO: MB070G-299

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Kidney
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
* Liver		Basophilic Focus	Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Skin		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-12]		
* Spleen		Leukemia Mononuclear	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 300

TRT#: 2
DOSE: 0 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 495
HISTO: MB070G-300

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland [Hyperplasia TGLS = 2-12]		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Fatty Change	Mild
* Lung		Inflammation	Minimal
* Mammary Gland [Adenocarcinoma TGLS = 1-13] [Lactation TGLS = 3-8]		Adenocarcinoma	
		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland [Adenoma TGLS = 4-3]	Pars Distalis	Adenoma	
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 301

TRT#: 4

SEX: Female

DAY ON TEST: 540

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-301

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* 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	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Infarct	Mild
		Leukemia Mononuclear	
		Mineralization	Minimal
		Nephropathy	Chronic, Mild
[Infarct TGLS = 6-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Pancreatic	Pigmentation	Mild
[Leukemia Mononuclear TGLS = 4-12,1-2]			
[Pigmentation TGLS = 4-12]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12,1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12,1-2]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 301	TRT#: 4	SEX: Female	DAY ON TEST: 540
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-301

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland	Pars Distalis	Hyperplasia Leukemia Mononuclear	Mild
[Leukemia Mononuclear TGLS = 5-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 302

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-302

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Parathyroid Gland	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Mild
		Leukemia Mononuclear	
		Necrosis	Mild
[Hemorrhage TGLS = 6-1]			
[Leukemia Mononuclear TGLS = 6-1]			
[Necrosis TGLS = 6-1]			
* Clitoral Gland		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Adenocarcinoma	
		Leukemia Mononuclear	
[Adenocarcinoma TGLS = 2-14]			
[Leukemia Mononuclear TGLS = 2-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 302	TRT#: 4	SEX: Female	DAY ON TEST: 733
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-302

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Leukemia Mononuclear Atrophy	Mild
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear Hyperplasia	Mild
	[Hyperplasia TGLS = 7-3]		
	[Leukemia Mononuclear TGLS = 7-3]		
* Salivary Glands		Leukemia Mononuclear	
* Skin		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-12,13]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Atrophy	Mild
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Cyst	Mild
	[Cyst TGLS = 4-9]		
	[Leukemia Mononuclear TGLS = 3-9,15]		
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 303

TRT#: 4

SEX: Female

DAY ON TEST: 712

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-303

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone	Femur	Hyperostosis	Mild
	Turbinates	Hyperostosis	Mild
* Bone Marrow		Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
* Brain		Compression	Moderate
		Hydrocephalus	Moderate
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 2-9]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-12]			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Inflammation	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 303

TRT#: 4

SEX: Female

DAY ON TEST: 712

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-303

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 304

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-304

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Mild
* Bone	Cranium	Hyperostosis	Mild
[Hyperostosis TGLS = 1-12]			
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
* Lymph Node, Mandibular		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 2-3]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 305

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-305

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Ovary | * Pancreas | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Parathyroid Gland

OBSERVATIONS

- | | | | |
|----------|---------------|------------------------|------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| | | Hemorrhage | Mild |
| | | Inflammation | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 306

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-306

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Skin
Spinal Cord	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Mandibular	* Salivary Glands	* Thymus
--------------------------	-------------------	----------

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
* Heart		Hypertrophy	Mild
		Leukemia Mononuclear	
[Hypertrophy TGLS = 7-4]			
* Kidney		Infarct	Moderate
		Leukemia Mononuclear	
[Infarct TGLS = 5-16]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-6]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-3]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 306

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-306

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-13]

[Necrosis TGLS = 3-12]

* Thyroid Gland

C Cell

Necrosis

Marked

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 307	TRT#: 4	SEX: Female	DAY ON TEST: 735
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-307

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Mammary Gland [Fibroadenoma TGLS = 1-12]		Fibroadenoma	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland [Adenoma TGLS = 2-3]	Pars Distalis	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 308

TRT#: 4

SEX: Female

DAY ON TEST: 707

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-308

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Liver
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Carcinoma	Metastatic (Pituitary Gland)
		Hemorrhage	Moderate
		Hyperplasia	Mild
* Clitoral Gland			
[Hyperplasia TGLS = 4-9]			
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Mandibular		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-2]			
* Mammary Gland		Infiltration Cellular	Histiocyte, Moderate
		Lactation	Moderate
[Infiltration Cellular TGLS = 3-8]			
[Lactation TGLS = 3-8]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Carcinoma	
[Carcinoma TGLS = 5-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 309

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-309

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone	Cranium	Hyperostosis	Mild
	Femur	Hyperostosis	Mild
	Turbinates	Hyperostosis	Mild
	[Hyperostosis TGLS = 4-13,4-13,4-13]		
	[Hyperostosis TGLS = 4-13,4-13,4-13]		
	[Hyperostosis TGLS = 4-13,4-13,4-13]		
* Kidney		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 2-7]		
* Liver		Basophilic Focus	Mild
	[Basophilic Focus TGLS = 3-5]		
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Mild
		Lactation	Mild
	[Fibroadenoma TGLS = 1-12]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 5-3]		
* Uterus		Polyp Stromal	
	[Polyp Stromal TGLS = 6-14]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 310

TRT#: 4

DOSE: 400 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 689

HISTO: MB070G-310

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|----------------------------|--------------------------|---------------------------|
| * Blood Vessel | * Bone | * Brain | * Clitoral Gland |
| * Esophagus | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Ovary |
| * Parathyroid Gland | * Skin | * Stomach, Forestomach | * Trachea |
| * Urinary Bladder | * Uterus | | |

AUTO PRECLUDES DIAG.

- * Intestine Small, Ileum

OBSERVATIONS

- | | | | |
|--------------------------|---------------|--------------------------------------|---------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Hyperplasia | Minimal |
| | | Leukemia Mononuclear | |
| | | Pheochromocytoma Benign | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Heart | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 2-6] | |
| Lymph Node | Mediastinal | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 1-12] | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 1-12] | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 1-12] | |
| * Mammary Gland | | Hyperplasia | Mild |
| Mesentery | Fat | Leukemia Mononuclear | |
| | Fat | Necrosis | Mild |
| | | [Necrosis TGLS = 6-13] | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Pancreas | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 310	TRT#: 4 DOSE: 400 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 689 HISTO: MB070G-310
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Leukemia Mononuclear TGLS = 5-3]	Leukemia Mononuclear	
* Salivary Glands	Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 3-5]	Leukemia Mononuclear	
* Stomach, Glandular	Necrosis	Minimal
* Thymus	Atrophy	Mild
	Leukemia Mononuclear	
* Thyroid Gland	Adenoma	
	C Cell	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 311

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-311

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Parathyroid Gland

OBSERVATIONS

- | | | | |
|----------------------------------|---------------|------------------------|------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| [Basophilic Focus TGLS = 1-12] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Ovary | | Cyst | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 312

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-312

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Minimal
* Lung		Inflammation	Mild
Lymph Node	Mediastinal	Hemorrhage	Mild
[Hemorrhage TGLS = 1-3]			
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 313

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-313

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone	Femur	Hyperostosis	Moderate
* Clitoral Gland	Bilateral	Adenoma	
[Adenoma TGLS = 1-12]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Fatty Change	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
[Angiectasis TGLS = 3-3]			
* Skin		Acanthosis	Mild
	Subcut Tiss	Cyst Epithelial Inclusion	
[Acanthosis TGLS = 2-13]			
[Cyst Epithelial Inclusion TGLS = 2-13]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 314

TRT#: 4

SEX: Female

DAY ON TEST: 400

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-314

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|------------------------------|---------------|------------------------|------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-14] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 315

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-315

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Inflammation	Minimal
* Mammary Gland		Galactoceles	Moderate
		Hyperplasia	Mild
		Lactation	Mild
[Galactoceles TGLS = 1-12]			
[Hyperplasia TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 316

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-316

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lung | * 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

- | | | | |
|----------|---------------|------------------------|---------------|
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Minimal |
| | | Inflammation | Mild |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| | | Inflammation | Minimal |
| * Thymus | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 317

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-317

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Ovary	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	Tissue NOS	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Mild
* Clitoral Gland		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
	[Leukemia Mononuclear TGLS = 4-7]		
	[Nephropathy TGLS = 4-7]		
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Lung	Alveolar Epith	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
	[Fibroadenoma TGLS = 1-15]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
* Pancreas		Leukemia Mononuclear	
	Note: THE NODULE APPEARS TO BE		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 317	TRT#: 4	SEX: Female	DAY ON TEST: 734
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-317

ORGAN AND ACCOUNTABLE SITE STATUS

Note: AN ACCESSORY SPLEEN WITH LEUKEMIA.

[Leukemia Mononuclear TGLS = 2-14]

* Pituitary Gland

Pars Distalis

Adenoma

Leukemia Mononuclear

[Adenoma TGLS = 6-13]

[Leukemia Mononuclear TGLS = 6-13]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-12]

* Thymus

Atrophy

Mild

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 318

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-318

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Uterus	

MISSING

* Parathyroid Gland	* Urinary Bladder
---------------------	-------------------

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Moderate
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 319

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-319

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* 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

Eye	Retina	Atrophy	Moderate
	Lens	Cataract	Mild
[Cataract TGLS = 2-12]			
* Kidney		Infarct	Moderate
		Nephropathy	Chronic, Mild
[Infarct TGLS = 1-7]			
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
		Infiltration Cellular	Lymphocyte, Mild
* Pituitary Gland	Pars Distalis	Cyst	Moderate
[Cyst TGLS = 3-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 320

TRT#: 4

SEX: Female

DAY ON TEST: 546

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-320

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-3]			
* Spleen		Hematopoietic Cell Proliferation	Mild
[Hematopoietic Cell Proliferation TGLS = 2-5]			
* Thymus		Atrophy	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 321

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-321

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Mild
* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
[Basophilic Focus TGLS = 2-5]			
[Hepatodiaphragmatic Nodule TGLS = 1-12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-13]			
Mesentery	Fat	Inflammation	Mild
[Inflammation TGLS = 4-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
[Cyst TGLS = 5-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 322

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-322

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|----------------------------|----------------|------------------------|---------------------|
| * Heart | | Cardiomyopathy | Minimal |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Inflammation | Minimal |
| * Lung | Alveolar Epith | Hyperplasia | Minimal |
| | | Infiltration Cellular | Histiocyte, Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Focal, Moderate |
| [Hyperplasia TGLS = 1-3] | | | |
| * Thymus | | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 323

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-323

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * 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 | Marked |
| * Intestine Large, Colon | | Intussusception | Mild |
| Note: THE CHANGE IN THE COLON IS PROBABLY A POST-MORTEM CHANGE
[Intussusception TGLS = 1-12] | | | |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Mild |
| | | Hepatodiaphragmatic Nodule | Mild |
| [Hepatodiaphragmatic Nodule TGLS = 2-13] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Angiectasis | Moderate |
| | Pars Distalis | Cyst | Mild |
| | Pars Distalis | Hyperplasia | Moderate |
| [Angiectasis TGLS = 3-3] | | | |
| * Thymus | | Atrophy | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 324

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-324

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* 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		Hyperplasia	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Uterus		Polyp Stromal	

[Polyp Stromal TGLS = 1-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 325

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-325

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Bone Marrow
- * Heart
- * Intestine Small, Duodenum
- * Lung
- * Ovary
- * Salivary Glands
- * Stomach, Glandular
- * Urinary Bladder

- * Adrenal Medulla
- * Brain
- * Intestine Large, Cecum
- * Intestine Small, Ileum
- * Lymph Node, Mandibular
- * Pancreas
- * Skin
- * Thymus
- * Uterus

- * Blood Vessel
- * Clitoral Gland
- * Intestine Large, Colon
- * Intestine Small, Jejunum
- * Lymph Node, Mesenteric
- * Parathyroid Gland
- * Spleen
- * Thyroid Gland

- * Bone
- * Esophagus
- * Intestine Large, Rectum
- * Islets, Pancreatic
- * Mammary Gland
- * Pituitary Gland
- * Stomach, Forestomach
- * Trachea

OBSERVATIONS

- * Kidney
- * Liver

Nephropathy
 Basophilic Focus
 Eosinophilic Focus
 Inflammation

Chronic, Minimal
 Minimal
 Mild
 Minimal

[Basophilic Focus TGLS = 1-5]

[Eosinophilic Focus TGLS = 2-5]

- * Nose

Olfactory Epi

Cytoplasmic Alteration

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 326

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-326

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Clitoral Gland	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear Vacuolization Cytoplasmic	Focal, Minimal
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Compression	Minimal
* Esophagus		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear Nephropathy	Chronic, Mild
[Nephropathy TGLS = 2-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5,6-15]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-6]			
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Mammary Gland		Fibroadenoma Lactation	Mild
[Fibroadenoma TGLS = 1-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 326

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-326

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen

[Leukemia Mononuclear TGLS = 9-13]

Leukemia Mononuclear

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 327

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-327

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Thymus

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Mild
* Mammary Gland		Lactation	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Skin	Subcut Tiss	Fibroma	Multiple
[Fibroma TGLS = 1-12,2-13]			
* Spleen		Congestion	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 328

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-328

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* 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	Focal, Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Moderate
		Hepatodiaphragmatic Nodule	Moderate
[Hepatodiaphragmatic Nodule TGLS = 3-13]			
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Minimal
		Lactation	Mild
[Fibroadenoma TGLS = 2-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
	Artery	Inflammation	Moderate
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 4-3]			
* Thymus		Amyloid Deposition	Moderate
		Atrophy	Mild
		Hemorrhage	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 329

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-329

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Moderate
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 1-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Pigmentation	Mild
[Pigmentation TGLS = 2-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-13]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 3-12]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 4-15]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 330 TRT#: 4 SEX: Female DAY ON TEST: 731
DOSE: 400 PPM DISP: Natural Death HISTO: MB070G-330

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Brain	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Clitoral Gland

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum * Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear Vacuolization Cytoplasmic	Focal, Mild
* Adrenal Medulla		Leukemia Mononuclear	
* Bone	Femur	Hyperostosis	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-14,6-13,4-14,4-14,6-13,4-14]		
	[Leukemia Mononuclear TGLS = 4-14,6-13,4-14,4-14,6-13,4-14]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-14,6-13,4-14]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-14,6-13,4-14]		
* Mammary Gland		Fibroadenoma Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 330	TRT#: 4	SEX: Female	DAY ON TEST: 731
	DOSE: 400 PPM	DISP: Natural Death	HISTO: MB070G-330

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibroadenoma TGLS = 1-12]

* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Necrosis	Minimal
* Thymus		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 331

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-331

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* 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

* Kidney		Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 332

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-332

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Mesenteric		Edema	Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12,13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 4-3]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 333

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-333

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Infiltration Cellular	Lymphocyte, Minimal
* Lung		Inflammation	Mild
* Mammary Gland		Fibroadenoma	
		Galactocele	Moderate
		Lactation	Mild
[Fibroadenoma TGLS = 2-13]			
[Galactocele TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
[Adenoma TGLS = 4-3]			
[Angiectasis TGLS = 4-3]			
[Hyperplasia TGLS = 4-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 333

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-333

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 334	TRT#: 4	SEX: Female	DAY ON TEST: 736
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-334

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-12]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 2-3]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 335

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-335

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Fatty Change	Minimal
* Lung		Inflammation	Minimal
* Lymph Node, Mandibular		Edema	Minimal
* Lymph Node, Mesenteric		Edema	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
	[Hyperplasia TGLS = 3-3]		
* Skin		Keratoacanthoma	
	[Keratoacanthoma TGLS = 1-12]		
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
	[Polyp Stromal TGLS = 2-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 336

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-336

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Bone	Femur	Hyperostosis	Mild
* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Clear Cell Focus	Minimal
* Lung		Inflammation	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Mammary Gland		Hyperplasia	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Cyst	Mild
[Cyst TGLS = 2-9]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-3]			
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 337

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-337

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 338

TRT#: 4
DOSE: 400 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: MB070G-338

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland	* Thymus
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OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 339

TRT#: 4

SEX: Female

DAY ON TEST: 681

DOSE: 400 PPM

DISP: Natural Death

HISTO: MB070G-339

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland
* Skin	* Thyroid Gland	* Trachea	

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Leukemia Mononuclear	
* Esophagus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-13]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Hepatodiaphragmatic Nodule	Moderate
[Hepatodiaphragmatic Nodule TGLS = 7-5,15]			
[Leukemia Mononuclear TGLS = 1-5,15]			
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-8,6-14,4-12,9-8,6-14,4-12]			
[Leukemia Mononuclear TGLS = 9-8,6-14,4-12,9-8,6-14,4-12]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-8,6-14,4-12]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-8,6-14,4-12]			
* Mammary Gland		Fibroadenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 339	TRT#: 4	SEX: Female	DAY ON TEST: 681
	DOSE: 400 PPM	DISP: Natural Death	HISTO: MB070G-339

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibroadenoma TGLS = 2-17]			
Mesentery		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-16]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-3]			
* Salivary Glands		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Stomach, Forestomach		Hyperplasia	Mild
* Stomach, Glandular		Necrosis	Mild
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 340

TRT#: 4

DOSE: 400 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: MB070G-340

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 1-12]			
* Bone	Cranium	Hyperostosis	Moderate
	Femur	Hyperostosis	Mild
[Hyperostosis TGLS = 3-13,3-13]			
[Hyperostosis TGLS = 3-13,3-13]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
		Fatty Change	Minimal
[Basophilic Focus TGLS = 2-5]			
[Fatty Change TGLS = 2-5]			
* Mammary Gland		Lactation	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 5-3,4-3]			
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 341	TRT#: 4	SEX: Female	DAY ON TEST: 734
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-341

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Developmental Malformation	Mild
	[Developmental Malformation TGLS = 1-5]		
* Lung		Inflammation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
	[Adenoma TGLS = 2-3]		
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 342

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-342

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex	Angiectasis	Mild
	Vacuolization Cytoplasmic	Focal, Mild
* Kidney	Nephropathy	Chronic, Mild
* Liver	Basophilic Focus	Minimal
* Mammary Gland	Lactation	Mild
* Thymus	Atrophy	Minimal
* Trachea	Infiltration Cellular	Lymphocyte, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 343

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-343

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Hyperplasia	Moderate
* Kidney		Infiltration Cellular	Lymphocyte, Moderate
		Leukemia Mononuclear	
		Lipoma	
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Hyperplasia	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Mild
	[Cyst TGLS = 2-3]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-12]		
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 344

TRT#: 4

SEX: Female

DAY ON TEST: 479

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-344

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Skin	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-3]			
* Adrenal Medulla		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-3]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-1,8-12]			
* Heart		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
[Leukemia Mononuclear TGLS = 14-7]			
[Nephropathy TGLS = 14-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-8,4-14,5-16,10-2,3-15,6-8,4-14,5-16,10-2,3-15,6-]			
[Leukemia Mononuclear TGLS = 6-8,4-14,5-16,10-2,3-15,6-8,4-14,5-16,10-2,3-15,6-]			
[Leukemia Mononuclear TGLS = 6-8,4-14,5-16,10-2,3-15,6-8,4-14,5-16,10-2,3-15,6-]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 344

TRT#: 4

DOSE: 400 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 479

HISTO: MB070G-344

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 6-8,4-14,3-15,5-16,10-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 6-8,4-14,3-15,5-16,10-2]		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration Inflammation	Mild Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland [Leukemia Mononuclear TGLS = 7-3]		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
Spinal Cord [Leukemia Mononuclear TGLS = 9-13]		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 1-5]		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Minimal
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus [Leukemia Mononuclear TGLS = 12-3]		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:55

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 345

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-345

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* 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

* Adrenal Cortex		Angiectasis	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Mild
		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
[Cyst TGLS = 1-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 346

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-346

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* 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
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:55
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 348

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-348

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Salivary Glands	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-12]			
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 4-7]			
* Liver		Basophilic Focus	Mild
[Leukemia Mononuclear TGLS = 2-5]		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 5-3]	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 5-3]			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Mild
		Leukemia Mononuclear	
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 349

TRT#: 4

SEX: Female

DAY ON TEST: 606

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-349

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Uterus

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 350

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-350

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* 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		Hyperplasia	Focal, Mild
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 351

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-351

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 1-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 352	TRT#: 4	SEX: Female	DAY ON TEST: 733
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-352

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Clitoral Gland	* Thymus
------------------	----------

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Developmental Malformation	Mild
		Eosinophilic Focus	Minimal
	[Developmental Malformation TGLS = 3-5]		
* Lung		Chordoma	Metastatic (Uncertain Primary Site)
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
	[Fibroadenoma TGLS = 1-12]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Nasolacrim Dct	Inflammation	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
	[Angiectasis TGLS = 5-3]		
	[Hyperplasia TGLS = 4-3]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 353	TRT#: 4	SEX: Female	DAY ON TEST: 735
	DOSE: 400 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-353

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
[Adenoma TGLS = 1-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 354

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-354

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* 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

MISSING

* Clitoral Gland

OBSERVATIONS

* Adrenal Cortex [Adenoma TGLS = 3-12]		Adenoma	
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney [Infarct TGLS = 4-7]		Infarct	Moderate
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
Lymph Node [Hemorrhage TGLS = 5-14] [Pigmentation TGLS = 5-14]	Mediastinal Mediastinal	Hemorrhage Pigmentation	Moderate Mild
* Mammary Gland [Fibroadenoma TGLS = 1-13,2-15]		Fibroadenoma	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland [Adenoma TGLS = 6-3]	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 355

TRT#: 4

SEX: Female

DAY ON TEST: 689

DOSE: 400 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-355

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-12,9-8,7-13,10-2,4-12,9-8,7-13,10-2]		
	[Leukemia Mononuclear TGLS = 4-12,9-8,7-13,10-2,4-12,9-8,7-13,10-2]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-12,9-8,7-13,10-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-12,9-8,7-13,10-2]		
* Mammary Gland		Fibroadenoma	
		Lactation	Moderate
	[Fibroadenoma TGLS = 2-14]		
	[Lactation TGLS = 1,3-15,16]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 355	TRT#: 4	SEX: Female	DAY ON TEST: 689
	DOSE: 400 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-355

ORGAN AND ACCOUNTABLE SITE STATUS

		Inflammation	Mild
		Leukemia Mononuclear	
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8-3]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Stomach, Forestomach		Hyperplasia	Mild
		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Atrophy	Mild
		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 356

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-356

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
		Vacuolization Cytoplasmic	Focal, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
[Basophilic Focus TGLS = 2-5]			
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 357

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-357

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Clitoral Gland		Hyperplasia	Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
* Mammary Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			
* Thymus		Atrophy	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 358

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-358

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-12]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Moderate
		Hepatodiaphragmatic Nodule	Moderate
		Inflammation	Mild
[Hepatodiaphragmatic Nodule TGLS = 4-14]			
* Lung		Hemorrhage	Minimal
* Mammary Gland		Adenocarcinoma	
		Lactation	Mild
[Adenocarcinoma TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal
[Cyst TGLS = 5-3]			
* Spleen		Hyperplasia	Lymphoid, Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 359

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 400 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-359

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-3]	Pars Distalis	Cyst	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 360

TRT#: 4

SEX: Female

DAY ON TEST: 456

DOSE: 400 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-360

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
[Basophilic Focus TGLS = 3-5]			
* Lung		Infiltration Cellular	Histiocyte, Minimal
		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Cyst	Mild
[Cyst TGLS = 1-9]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 361

TRT#: 6

SEX: Female

DAY ON TEST: 686

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-361

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Inflammation	Minimal
* Lung		Inflammation	Mild
[Inflammation TGLS = 2-12]			
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 4-3]			
[Cyst TGLS = 4-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 3-13]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 362

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-362

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex

* Bone Marrow

* Heart

* Intestine Small, Duodenum

* Liver

* Mammary Gland

* Skin

* Thyroid Gland

* Adrenal Medulla

* Brain

* Intestine Large, Cecum

* Intestine Small, Ileum

* Lung

* Ovary

* Spleen

* Trachea

* Blood Vessel

* Clitoral Gland

* Intestine Large, Colon

* Intestine Small, Jejunum

* Lymph Node, Mandibular

* Pancreas

* Stomach, Forestomach

* Urinary Bladder

* Bone

* Esophagus

* Intestine Large, Rectum

* Islets, Pancreatic

* Lymph Node, Mesenteric

* Salivary Glands

* Stomach, Glandular

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney

* Nose

* Pituitary Gland

* Thymus

* Uterus

Olfactory Epi

Pars Distalis

Nephropathy

Cytoplasmic Alteration

Hyperplasia

Atrophy

Dilatation

Chronic, Mild

Mild

Moderate

Mild

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 363

TRT#: 6

SEX: Female

DAY ON TEST: 606

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-363

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Pituitary Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Adenoma	
* Bone Marrow		Hyperplasia	Mild
* Heart	Coron Artery	Inflammation	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Mammary Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 1-8]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Foreign Body	Mild
	Respirat Epith	Hyperplasia	Minimal
		Inflammation	Minimal
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Mild
* Uterus		Dilatation	Mild
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 2-12,13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 364

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-364

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Bone	Turbinates	Hyperostosis	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
		Inflammation	Mild
* Lung		Inflammation	Minimal
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Mild
		Lactation	Moderate
[Fibroadenoma TGLS = 1-16]			
[Lactation TGLS = 1-16]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Moderate
[Angiectasis TGLS = 4-3]			
[Hyperplasia TGLS = 4-3]			
* Spleen		Hyperplasia	Lymphoid, Marked
[Hyperplasia TGLS = 2-12]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 365

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-365

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	* Islets, Pancreatic	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-5]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Cyst	Moderate
		Leukemia Mononuclear	
	[Cyst TGLS = 4-3]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-5]		
* Stomach, Glandular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 365

TRT#: 6
DOSE: 800 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: MB070G-365

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus	Atrophy	Mild
* Urinary Bladder	Leukemia Mononuclear	
* Uterus	Polyp Stromal	
[Polyp Stromal TGLS = 2-9]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 366

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-366

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* 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

* Kidney		Nephropathy	Chronic, Mild
* Lung		Inflammation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Developmental Malformation	

[Developmental Malformation TGLS = 1-12]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 367

TRT#: 6
DOSE: 800 PPM

SEX: Female
DISP: Scheduled Sacrifice

DAY ON TEST: 456
HISTO: MB070G-367

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Dilatation	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 1-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 368

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-368

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Blood Vessel | * Bone | * Esophagus | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic | * Pancreas | * Parathyroid Gland | * Skin |
| * Thyroid Gland | | | |

OBSERVATIONS

- | | | | |
|---|---------------|----------------------------|----------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 9-1] | | | |
| * Clitoral Gland | | Hyperplasia | Mild |
| | | Leukemia Mononuclear | |
| [Hyperplasia TGLS = 3-9] | | | |
| * Heart | | Leukemia Mononuclear | |
| * Intestine Large, Cecum | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Hepatodiaphragmatic Nodule | Mild |
| | | Leukemia Mononuclear | |
| [Hepatodiaphragmatic Nodule TGLS = 7-5] | | | |
| [Leukemia Mononuclear TGLS = 8-5] | | | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| * Mammary Gland | | Hyperplasia | Moderate |
| | | Lactation | Moderate |
| [Hyperplasia TGLS = 2-14] | | | |
| [Lactation TGLS = 1-12] | | | |
| Mesentery | Fat | Necrosis | Moderate |
| [Necrosis TGLS = 6-13] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 368

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-368

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
		Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 10-3]		
	[Leukemia Mononuclear TGLS = 10-3]		
* Salivary Glands		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
		Ulcer	Moderate
* Thymus		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 369

TRT#: 6

SEX: Female

DAY ON TEST: 670

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-369

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Pancreas	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mesenteric	* Parathyroid Gland
--------------------------	---------------------

OBSERVATIONS

* Clitoral Gland		Hyperplasia Inflammation	Mild Moderate
[Inflammation TGLS = 5-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2-14,3-15,4-16]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 7-3]			
[Hyperplasia TGLS = 7-3]			
* Skin	Tail	Schwannoma Malignant	
[Schwannoma Malignant TGLS = 1-12]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thymus		Atrophy	Moderate
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 6-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 369

TRT#: 6

SEX: Female

DAY ON TEST: 670

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-369

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 370

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-370

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
		Hyperplasia	Focal, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Fibroadenoma	Multiple
		Lactation	Mild
[Fibroadenoma TGLS = 1-13,2-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 3-3]			
[Angiectasis TGLS = 3-3]			
[Cyst TGLS = 3-3]			
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 371

TRT#: 6

SEX: Female

DAY ON TEST: 707

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-371

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear Necrosis	Moderate
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia Hyperplasia	Mild Minimal
* Heart		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Kidney		Infarct	Moderate
* Liver		Leukemia Mononuclear Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration Inflammation	Moderate Moderate
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 371

TRT#: 6

DOSE: 800 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 707

HISTO: MB070G-371

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen	Leukemia Mononuclear	
* Stomach, Forestomach	Hyperplasia	Mild
	Leukemia Mononuclear	
	Ulcer	Moderate
* Thymus	Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 372	TRT#: 6	SEX: Female	DAY ON TEST: 365
	DOSE: 800 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-372

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephroblastoma	
[Nephroblastoma TGLS = 1-7]			
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Mild
		Edema	Focal, Mild
* Pancreas		Inflammation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 373

TRT#: 6

SEX: Female

DAY ON TEST: 641

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-373

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Brain		Compression	Moderate
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Inflammation	Minimal
* Lung		Hemorrhage	Mild
* Mammary Gland		Lactation	Mild
[Lactation TGLS = 1-8]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			
* Stomach, Forestomach		Hyperplasia	Moderate
		Ulcer	Marked
[Ulcer TGLS = 3-4]			
* Stomach, Glandular		Ulcer	Mild
[Ulcer TGLS = 3-4]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 374

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-374

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 1-9]			
Eye	Retina	Degeneration	Moderate
[Hemorrhage TGLS = 6-14]		Hemorrhage	Moderate
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Adenocarcinoma	
[Adenocarcinoma TGLS = 2-12]		Lactation	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 374

TRT#: 6
DOSE: 800 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: MB070G-374

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 7-3]

[Hyperplasia TGLS = 7-3]

[Leukemia Mononuclear TGLS = 7-3]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-5]

* Thymus

Atrophy

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 375

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-375

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-15]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
[Basophilic Focus TGLS = 6-5]			
Lymph Node	Renal	Hemorrhage	Mild
	Renal	Pigmentation	Mild
[Hemorrhage TGLS = 4-13]			
[Pigmentation TGLS = 4-15]			
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Moderate
* Mammary Gland		Fibroadenoma	
		Lactation	Moderate
[Fibroadenoma TGLS = 1-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 7-3]			
* Thymus		Atrophy	Minimal
* Uterus		Hemorrhage	Marked
[Hemorrhage TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 376

TRT#: 6

SEX: Female

DAY ON TEST: 641

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-376

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Congestion	Mild
		Hyperplasia	Focal, Minimal
* Brain		Hemorrhage	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Hemorrhage	Moderate
	Alveolar Epith	Hyperplasia	Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Mild
[Fibroadenoma TGLS = 2-12]			
[Hyperplasia TGLS = 1-8]			
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal
[Angiectasis TGLS = 3-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 377

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-377

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Clitoral Gland		Adenoma	
		Hyperplasia	Mild
[Adenoma TGLS = 1-12]			
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Inflammation	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Galactocele	Marked
		Inflammation	Moderate
		Lactation	Mild
[Galactocele TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-3]			
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Hemorrhage	Moderate
		Polyp Stromal	
[Polyp Stromal TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 378

TRT#: 6

SEX: Female

DAY ON TEST: 427

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-378

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lung | * 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

- | | | | |
|------------------------|---------------|------------------------|------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Nose | Olfactory Epi | Atrophy | Focal, Mild |
| | Olfactory Epi | Cytoplasmic Alteration | Mild |
| | | Edema | Focal, Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 1-3] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 379

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-379

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone [Hyperostosis TGLS = 3-13]	Cranium	Hyperostosis	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Mammary Gland [Fibroadenoma TGLS = 1-12]		Fibroadenoma	
		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland [Adenoma TGLS = 4-3]	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 380

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-380

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Brain		Compression	Moderate
* Clitoral Gland		Hyperplasia	Mild
Ear	Pinna	Schwannoma Malignant	
[Schwannoma Malignant TGLS = 1-17]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Mixed Cell Focus	Moderate
[Mixed Cell Focus TGLS = 5-17]			
* Mammary Gland		Fibroadenoma	
		Lactation	Minimal
[Fibroadenoma TGLS = 3-14]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 8-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
	Nasolacrim Dct	Inflammation	Mild
Pharynx	Palate	Hyperplasia	Marked
[Hyperplasia TGLS = 10-10]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Marked
[Adenoma TGLS = 9-3]			
[Cyst TGLS = 9-3]			
* Thyroid Gland	Follicular Cel	Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 380

TRT#: 6
DOSE: 800 PPM

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: MB070G-380

ORGAN AND ACCOUNTABLE SITE STATUS

[Carcinoma TGLS = 4-2]	
* Uterus	Polyp Stromal
[Polyp Stromal TGLS = 7-9]	
Vagina	Squamous Cell Papilloma
[Squamous Cell Papilloma TGLS = 2-13]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 381

TRT#: 6

SEX: Female

DAY ON TEST: 707

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-381

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Colon	* Intestine Small, Duodenum	* Islets, Pancreatic	* Ovary
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mesenteric	* Mammary Gland	* Thymus
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AUTO PRECLUDES DIAG.

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

* Heart	Atrium	Dilatation	Moderate
* Intestine Large, Rectum		Sarcoma	Metastatic (Uncertain Primary Site)
* Kidney	Bilateral	Hydronephrosis	Marked
[Hydronephrosis TGLS = 4,5-7]			
* Liver		Basophilic Focus	Mild
* Lung		Hemorrhage	Mild
		Sarcoma	Metastatic (Uncertain Primary Site)
		Congestion	Mild
* Lymph Node, Mandibular			
[Congestion TGLS = 1-2]			
* Mammary GI			
Note: NOT PRESENT IN WET TISSUE.			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
Skeletal Muscle		Sarcoma	
[Sarcoma TGLS = 8-13]			
* Skin	Subcut Tiss	Sarcoma	
[Sarcoma TGLS = 6-14,7-12]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach, Forestomach		Ulcer	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 381

TRT#: 6

SEX: Female

DAY ON TEST: 707

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-381

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

Animal Note: NOT PRESENT IN WET TISSUE.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 382

TRT#: 6

SEX: Female

DAY ON TEST: 659

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-382

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Brain		Compression	Mild
		Hydrocephalus	Mild
* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 3-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-3]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 2-12]			
* Spleen		Pigmentation	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 383

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-383

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 2-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
[Hepatodiaphragmatic Nodule TGLS = 4-13]		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Nasolacrim Dct	Inflammation	Mild
		Inflammation	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 384

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-384

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland [Hyperplasia TGLS = 1-9]		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
* Ovary		Cyst	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 385

TRT#: 6

SEX: Female

DAY ON TEST: 684

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-385

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Bone Marrow		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Congestion	Minimal
		Fatty Change	Mild
		Hematopoietic Cell Proliferation	Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Moderate
[Fibroadenoma TGLS = 2,3-14]			
[Lactation TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Thymus		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Sarcoma Stromal	
[Sarcoma Stromal TGLS = 4,5-16,15]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 386

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-386

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-5,5-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 9-14,3-13,4-3,9-14,3-13,4-3]		
	[Leukemia Mononuclear TGLS = 9-14,3-13,4-3,9-14,3-13,4-3]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 9-14,3-13,4-3]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 9-14,3-13,4-3]		
* Mammary Gland		Adenocarcinoma	
		Lactation	Moderate
		Leukemia Mononuclear	
	[Adenocarcinoma TGLS = 1-12]		
	[Leukemia Mononuclear TGLS = 1-12]		
* Nose		Cytoplasmic Alteration	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 386

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-386

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary		Leukemia Mononuclear
* Pancreas		Leukemia Mononuclear
	[Leukemia Mononuclear TGLS = 3-13]	Leukemia Mononuclear
* Pituitary Gland		Leukemia Mononuclear
	[Leukemia Mononuclear TGLS = 8-3]	
* Spleen		Leukemia Mononuclear
	[Leukemia Mononuclear TGLS = 2-5]	
* Stomach, Forestomach		Leukemia Mononuclear
* Thymus		Leukemia Mononuclear
* Thyroid Gland	C Cell	Adenoma
* Uterus		Leukemia Mononuclear
	[Leukemia Mononuclear TGLS = 7-15]	Polyp Stromal
	[Polyp Stromal TGLS = 7-15]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 387

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-387

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Necrosis	Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 388

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-388

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 3-12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-5]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 389

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-389

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Ovary	* Pancreas
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone	Turbinates	Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-12]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-7]			
[Nephropathy TGLS = 3-7]		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-6]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 7-3]	Pars Distalis	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 389

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-389

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 7-3]

* Salivary Glands

Leukemia Mononuclear

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 2-5]

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 390

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-390

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
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OBSERVATIONS

* Clitoral Gland	Bilateral	Adenoma	
[Adenoma TGLS = 1-12]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Inflammation	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
		Inflammation	Mild
* Mammary Gland		Lactation	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Nasolacrim Dct	Squamous Cell Carcinoma	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Intermed	Angiectasis	Moderate
[Adenoma TGLS = 4-3]			
* Uterus		Dilatation	Mild
Note: NO MASS WAS NOTED IN THE WET TISSUES TO HAVE			
Note: CAUSED THE DILATATION.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 390

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-390

ORGAN AND ACCOUNTABLE SITE STATUS

[Dilatation TGLS = 3-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 391

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-391

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Inflammation	Minimal
* Mammary Gland		Fibroadenoma	Multiple
		Galactocele	Moderate
		Hyperplasia	Mild
	[Fibroadenoma TGLS = 1-12,2-13,3-14]		
	[Galactocele TGLS = 4-15]		
	[Hyperplasia TGLS = 4-15]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Respirat Epith	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 5-3]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Dilatation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 392

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-392

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea		

MISSING

* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone	Cranium	Hyperostosis	Moderate
[Hyperostosis TGLS = 8-17]			
* Bone Marrow		Hyperplasia	Moderate
* Brain		Compression	Moderate
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-16]			
* Kidney		Leukemia Mononuclear	
* Liver		Basophilic Focus	Mild
[Basophilic Focus TGLS = 7-5]		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-20]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-20]			
* Mammary Gland		Adenocarcinoma	
		Fibroadenoma	
		Galactocele	Marked
		Lactation	Moderate
[Adenocarcinoma TGLS = 3-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 392	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 800 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-392

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibroadenoma TGLS = 2-12]			
[Galactocele TGLS = 3-14,4-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Leukemia Mononuclear	
[Angiectasis TGLS = 9-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-15]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 393

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-393

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Hyperplasia	Moderate
Ear	Pinna	Schwannoma Malignant	
	[Schwannoma Malignant TGLS = 1-12]		
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Eosinophilic Focus	Mild
		Leukemia Mononuclear	
* Lung		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		
* Thymus		Atrophy	Minimal
Vagina		Inflammation	Marked
	[Inflammation TGLS = 3-13]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 394

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-394

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Thymus

OBSERVATIONS

Harderian Gland [Inflammation TGLS = 3-12]		Inflammation	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Inflammation	Mild
		Necrosis	Mild
* Mammary Gland		Lactation	Mild
* Ovary [Cyst TGLS = 1-9]		Cyst	Mild
* Pituitary Gland [Angiectasis TGLS = 2-3] [Cyst TGLS = 2-3]	Pars Distalis Pars Distalis	Angiectasis Cyst	Mild Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 395

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-395

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Bone Marrow
* Heart
* Intestine Small, Duodenum
* Liver
* Ovary
* Spleen
* Thyroid Gland

* Adrenal Medulla
* Brain
* Intestine Large, Cecum
* Intestine Small, Ileum
* Lymph Node, Mandibular
* Parathyroid Gland
* Stomach, Forestomach
* Trachea

* Blood Vessel
* Clitoral Gland
* Intestine Large, Colon
* Intestine Small, Jejunum
* Lymph Node, Mesenteric
* Pituitary Gland
* Stomach, Glandular
* Urinary Bladder

* Bone
* Esophagus
* Intestine Large, Rectum
* Islets, Pancreatic
* Mammary Gland
* Salivary Glands
* Thymus
* Uterus

OBSERVATIONS

* Kidney
* Lung

* Nose
* Pancreas

* Skin

Olfactory Epi
Acinar Cell

Tail

Nephropathy
Infiltration Cellular
Inflammation
Cytoplasmic Alteration
Atrophy
Infiltration Cellular
Keratoacanthoma

Chronic, Minimal
Histiocyte, Minimal
Minimal
Minimal
Mild
Lymphocyte, Minimal

[Keratoacanthoma TGLS = 1-12]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 396

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-396

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
		Infiltration Cellular	Lymphocyte, Moderate
	Valve	Inflammation	Chronic, Marked
* Kidney		Infiltration Cellular	Lymphocyte, Minimal
		Nephropathy	Chronic, Minimal
* Liver		Infiltration Cellular	Lymphocyte, Mild
		Inflammation	Mild
		Necrosis	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mediastinal	Hemorrhage	Moderate
	Mediastinal	Pigmentation	Mild
		[Hemorrhage TGLS = 2-13]	
		[Pigmentation TGLS = 2-13]	
* Mammary Gland		Fibroadenoma	
		[Fibroadenoma TGLS = 1-12]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 396

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-396

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 397	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 800 PPM	DISP: Terminal Sacrifice	HISTO: MB070G-397

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* 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	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
* Bone	Femur	Hyperostosis	Mild
	Turbinates	Hyperostosis	Mild
* Clitoral Gland		Ectasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney	Transit Epithe	Hyperplasia	Focal, Minimal
		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 398	TRT#: 6	SEX: Female	DAY ON TEST: 456
	DOSE: 800 PPM	DISP: Scheduled Sacrifice	HISTO: MB070G-398

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* 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	* Uterus		

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 399

TRT#: 6

SEX: Female

DAY ON TEST: 635

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-399

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Nose	* Parathyroid Gland
* Skin	* Stomach, Forestomach	* Thyroid Gland	* Trachea

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-8]			
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Stomach, Glandular		Ulcer	Mild
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Dilatation	Mild
[Dilatation TGLS = 4-9]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 399

TRT#: 6

SEX: Female

DAY ON TEST: 635

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-399

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 400

TRT#: 6

SEX: Female

DAY ON TEST: 687

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-400

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone Marrow	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Skin

OBSERVATIONS

* Adrenal Cortex		Fibrosis	Mild
* Bone	Femur	Hyperostosis	Mild
* Brain		Compression	Moderate
		Hydrocephalus	Mild
* Kidney		Necrosis	Moderate
* Liver		Basophilic Focus	Minimal
		Leukocytosis	Mild
* Lung		Congestion	Mild
[Congestion TGLS = 2-6]			
Lymph Node	Renal	Hemorrhage	Moderate
[Hemorrhage TGLS = 4-13]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-14]			
* Ovary		Cyst	Marked
[Cyst TGLS = 3-12]			
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-3]			
* Spleen		Hematopoietic Cell Proliferation	Minimal
* Thymus		Atrophy	Mild
* Uterus		Sarcoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 400

TRT#: 6

SEX: Female

DAY ON TEST: 687

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-400

ORGAN AND ACCOUNTABLE SITE STATUS

[Sarcoma TGLS = 3-12]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 401

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-401

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone	Cranium	Hyperostosis	Moderate
	Femur	Hyperostosis	Moderate
	Turbinates	Hyperostosis	Moderate
	[Hyperostosis TGLS = 3-13,3-13,3-13]		
	[Hyperostosis TGLS = 3-13,3-13,3-13]		
	[Hyperostosis TGLS = 3-13,3-13,3-13]		
* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
	[Adenoma TGLS = 1-12]		
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
	[Hyperplasia TGLS = 4-3]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-5]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 402

TRT#: 6

SEX: Female

DAY ON TEST: 584

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-402

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* 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	

MISSING

* Pituitary Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 1-5]		
* Lung		Congestion	Moderate
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 403

TRT#: 6

SEX: Female

DAY ON TEST: 673

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-403

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Hyperplasia	Focal, Mild
* Bone	Maxilla	Hyperostosis	Mild
* Brain		Compression	Moderate
		Hydrocephalus	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Mild
		Inflammation	Minimal
[Eosinophilic Focus TGLS = 2-12]			
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-3]			
* Stomach, Forestomach		Inflammation	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 404

TRT#: 6

SEX: Female

DAY ON TEST: 694

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-404

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Thrombosis	Mild
		Vacuolization Cytoplasmic	Focal, Mild
* Brain		Degeneration	Focal, Mild
	Meninges	Hemorrhage	Mild
	Meninges	Inflammation	Focal, Mild
		Thrombosis	Focal, Moderate
[Degeneration TGLS = 4-1]			
[Hemorrhage TGLS = 4-1]			
[Inflammation TGLS = 4-1]			
[Thrombosis TGLS = 4-1]			
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Centrilobular	Degeneration	Marked
		Necrosis	Mild
[Degeneration TGLS = 1-5]			
[Necrosis TGLS = 1-5]			
Lymph Node	Mediastinal	Hemorrhage	Mild
	Mediastinal	Pigmentation	Mild
[Hemorrhage TGLS = 2-12]			
* Lymph Node, Mandibular		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-12]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 404	TRT#: 6	SEX: Female	DAY ON TEST: 694
	DOSE: 800 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-404

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 5-3]			
* Spleen		Pigmentation	Moderate
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 405

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-405

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Eosinophilic Focus	Mild
		Fatty Change	Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
[Angiectasis TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 406

TRT#: 6

SEX: Female

DAY ON TEST: 643

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-406

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Clitoral Gland

OBSERVATIONS

* Clitoral Gland			
Note: NEOPLASM.			
Note: CLITORAL GLANDS WERE EFFACED BY THE MAMMARY GLAND			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lymph Node, Mandibular		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
			[Fibroadenoma TGLS = 1-12]
			[Lactation TGLS = 2-8]
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Nasolacrim Dct	Inflammation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Marked
	Pars Distalis	Hyperplasia	Mild
			[Cyst TGLS = 3-3]
* Thymus		Atrophy	Moderate
* Thyroid Gland	Follicular Cel	Adenoma	
	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 406

TRT#: 6
DOSE: 800 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 643
HISTO: MB070G-406

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 407

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-407

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* 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	

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-5]			
* Lung		Inflammation	Mild
[Inflammation TGLS = 2-6]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 408

TRT#: 6

SEX: Female

DAY ON TEST: 700

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-408

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Hematopoietic Cell Proliferation	Minimal
* Bone Marrow		Histiocytic Sarcoma	
* Heart		Cardiomyopathy	Mild
* Liver		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 7-5]			
* Lung		Infiltration Cellular	Histiocyte, Moderate
Lymph Node	Mediastinal	Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 10-12]			
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Moderate
* Mammary Gland		Fibroadenoma	Multiple
		Infiltration Cellular	Histiocyte, Moderate
[Fibroadenoma TGLS = 1-15,2-16,3-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 9-3]			
* Spleen		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 5,6-5,13]			
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 409

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-409

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 410

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-410

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Mild
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-12]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
[Basophilic Focus TGLS = 3-5]		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 411

TRT#: 6

SEX: Female

DAY ON TEST: 677

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-411

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Hepatodiaphragmatic Nodule	Moderate
		Leukemia Mononuclear	
	[Hepatodiaphragmatic Nodule TGLS = 4-13]		
	[Leukemia Mononuclear TGLS = 5-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,7-12,11-8,6-14,1-2,7-12,11-8,6-14]		
	[Leukemia Mononuclear TGLS = 1-2,7-12,11-8,6-14,1-2,7-12,11-8,6-14]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,7-12,11-8,6-14]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-2,7-12,11-8,6-14]		
* Mammary Gland		Lactation	Mild
		Leukemia Mononuclear	
	[Lactation TGLS = 2-8]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 411	TRT#: 6	SEX: Female	DAY ON TEST: 677
	DOSE: 800 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-411

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-8]			
* Nose		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Marked
		Leukemia Mononuclear	
[Cyst TGLS = 8-3]			
[Leukemia Mononuclear TGLS = 8-3]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Stomach, Forestomach		Hyperplasia	Mild
		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-3]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 412

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-412

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Cytologic Alterations	Mild
* Brain		Compression	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
		Lactation	Mild
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 2-3]			
[Angiectasis TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 413

TRT#: 6

SEX: Female

DAY ON TEST: 662

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-413

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Mandibular	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
		Vacuolization Cytoplasmic	Focal, Mild
* Brain		Compression	Moderate
		Hydrocephalus	Mild
[Compression TGLS = 6-1]			
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-9]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Infiltration Cellular	Lymphocyte, Minimal
		Inflammation	Mild
* Lymph Node, Mesenteric		Infiltration Cellular	Histiocyte, Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 3-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-3]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-9]			
* Stomach, Forestomach		Ulcer	Moderate
* Thymus		Atrophy	Moderate
* Uterus		Polyp Stromal	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 413

TRT#: 6

SEX: Female

DAY ON TEST: 662

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-413

ORGAN AND ACCOUNTABLE SITE STATUS

[Polyp Stromal TGLS = 4-9]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 414

TRT#: 6

SEX: Female

DAY ON TEST: 736

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-414

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Mammary Gland		Lactation	Mild
* Pancreas		Infiltration Cellular	Lymphocyte, Minimal
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Thymus		Atrophy	Mild
* Uterus		Polyp Stromal	

[Polyp Stromal TGLS = 1-12]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 415

TRT#: 6

SEX: Female

DAY ON TEST: 456

DOSE: 800 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-415

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Bone Marrow
- * Heart
- * Intestine Small, Duodenum
- * Liver
- * Mammary Gland
- * Skin
- * Thymus
- * Uterus

- * Adrenal Medulla
- * Brain
- * Intestine Large, Cecum
- * Intestine Small, Ileum
- * Lung
- * Ovary
- * Spleen
- * Thyroid Gland

- * Blood Vessel
- * Clitoral Gland
- * Intestine Large, Colon
- * Intestine Small, Jejunum
- * Lymph Node, Mandibular
- * Parathyroid Gland
- * Stomach, Forestomach
- * Trachea

- * Bone
- * Esophagus
- * Intestine Large, Rectum
- * Islets, Pancreatic
- * Lymph Node, Mesenteric
- * Salivary Glands
- * Stomach, Glandular
- * Urinary Bladder

OBSERVATIONS

- * Kidney
 - * Nose
 - * Pancreas
 - * Pituitary Gland
- [Hyperplasia TGLS = 1-3]

- Olfactory Epi
- Acinar Cell
- Pars Distalis

- Nephropathy
- Cytoplasmic Alteration
- Atrophy
- Hyperplasia

- Chronic, Minimal
- Moderate
- Minimal
- Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 416

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-416

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
		Ectasia	Mild
[Adenoma TGLS = 4-14]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Inflammation	Minimal
* Mammary Gland		Fibroadenoma	Multiple
		Lactation	Mild
[Fibroadenoma TGLS = 1-12,2-13]			
[Lactation TGLS = 3-8]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Moderate
[Cyst TGLS = 5-3]			
* Uterus		Dilatation	Minimal

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 417

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-417

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Minimal
* Brain		Compression	Moderate
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 3-15]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Fatty Change	Mild
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
* Mammary Gland		Fibroadenoma	
		Infiltration Cellular	Histiocyte, Moderate
		Lactation	Moderate
[Fibroadenoma TGLS = 1-14]			
[Infiltration Cellular TGLS = 2-13]			
[Lactation TGLS = 2-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 418

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-418

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Adrenal Medulla	* Thymus
-------------------	----------

OBSERVATIONS

* Brain		Compression	Mild
* Clitoral Gland		Adenoma	
		Ectasia	Marked
[Adenoma TGLS = 2-13]			
[Ectasia TGLS = 3-13]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Moderate
		Leukemia Mononuclear	
* Lung		Infiltration Cellular	Lymphocyte, Minimal
		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Infiltration Cellular	Histiocyte, Mild
[Fibroadenoma TGLS = 1-12]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-3]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 418

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 800 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-418

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 4-5]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 419

TRT#: 6

SEX: Female

DAY ON TEST: 721

DOSE: 800 PPM

DISP: Natural Death

HISTO: MB070G-419

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Rectum	* Islets, Pancreatic	* Trachea

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-6]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-15,16]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-15,16]		
* Mammary Gland		Leukemia Mononuclear	
Mesentery		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-15,16]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Leukemia Mononuclear	
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 419	TRT#: 6	SEX: Female	DAY ON TEST: 721
	DOSE: 800 PPM	DISP: Natural Death	HISTO: MB070G-419

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Skin	Subcut Tiss	Fibroma	
		Leukemia Mononuclear	
[Fibroma TGLS = 1-17]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 420

TRT#: 6

SEX: Female

DAY ON TEST: 686

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-420

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| * Bone | * Brain | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Islets, Pancreatic |
| * Skin | * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland |
| * Trachea | | | |

MISSING

- * Parathyroid Gland

AUTO PRECLUDES DIAG.

- * Intestine Small, Jejunum

OBSERVATIONS

- | | | | |
|--------------------------|---------------|---|----------|
| * Adrenal Cortex | | Leukemia Mononuclear | |
| * Adrenal Medulla | | Pheochromocytoma Benign | |
| * Blood Vessel | Aorta | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Clitoral Gland | | Adenoma | |
| | | Hyperplasia | Moderate |
| | | Leukemia Mononuclear | |
| | | [Adenoma TGLS = 4-9] | |
| | | [Leukemia Mononuclear TGLS = 4-9] | |
| * Heart | | Leukemia Mononuclear | |
| * Intestine Small, Ileum | | Leukemia Mononuclear | |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 7-5] | |
| * Lung | | Leukemia Mononuclear | |
| Lymph Node | Deep Cervical | Leukemia Mononuclear | |
| | Mediastinal | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 10-12,9-8,12-15,1-2,10-12,9-8,12-15,1-2] | |
| | | [Leukemia Mononuclear TGLS = 10-12,9-8,12-15,1-2,10-12,9-8,12-15,1-2] | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| | | [Leukemia Mononuclear TGLS = 10-12,9-8,12-15,1-2] | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 420

TRT#: 6

SEX: Female

DAY ON TEST: 686

DOSE: 800 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-420

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 10-12,9-8,12-15,1-2]		Leukemia Mononuclear	
* Mammary Gland [Fibroadenoma TGLS = 2-14] [Hyperplasia TGLS = 3-8] [Leukemia Mononuclear TGLS = 3-8]		Fibroadenoma Hyperplasia Leukemia Mononuclear	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Minimal
* Ovary Oviduct [Leukemia Mononuclear TGLS = 6-9]		Leukemia Mononuclear Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland [Leukemia Mononuclear TGLS = 11-3]	Pars Distalis	Cyst Leukemia Mononuclear	Mild
* Salivary Glands		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 8-5]		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
* Uterus [Fibrosis TGLS = 5-13]		Fibrosis Leukemia Mononuclear	Marked

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 421

TRT#: 8

SEX: Female

DAY ON TEST: 645

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-421

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic | * Liver |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Ovary |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|------------------------------|---------------|------------------------|------------------|
| * Adrenal Cortex | | Necrosis | Minimal |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-12] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Pancreas | Acinar Cell | Atrophy | Minimal |
| * Pituitary Gland | Pars Distalis | Angiectasis | Moderate |
| | Pars Distalis | Hyperplasia | Marked |
| [Angiectasis TGLS = 2-3] | | | |
| [Hyperplasia TGLS = 2-3] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 422

TRT#: 8

SEX: Female

DAY ON TEST: 701

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-422

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Parathyroid Gland
* Salivary Glands	* Skin	* Thyroid Gland	* Trachea
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Necrosis	Mild
[Necrosis TGLS = 1-12]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Hyperplasia	Mild
		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Moderate
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 422

TRT#: 8

SEX: Female

DAY ON TEST: 701

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-422

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 423

TRT#: 8

SEX: Female

DAY ON TEST: 691

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-423

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	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Trachea	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Focal, Mild
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney	Renal Tubule	Carcinoma	
		Cyst	Marked
		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
[Cyst TGLS = 9-12]			
[Leukemia Mononuclear TGLS = 9-12]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
Lymph Node	Lumbar	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-14,10-8,7-13,2-2,11-14,10-8,7-13,2-2]			
[Leukemia Mononuclear TGLS = 11-14,10-8,7-13,2-2,11-14,10-8,7-13,2-2]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-8,7-13,2-2,11-14]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-14,10-8,7-13,2-2]			
* Mammary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 423	TRT#: 8	SEX: Female	DAY ON TEST: 691
	DOSE: 1600 PPM	DISP: Moribund Sacrifice	HISTO: MB070G-423

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Mild
* Ovary		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland		Leukemia Mononuclear	
* Skin	Tail	Fibrosis	Moderate
[Fibrosis TGLS = 1-15]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-5]			
* Stomach, Forestomach		Hyperplasia Leukemia Mononuclear	Minimal
* Stomach, Glandular		Leukemia Mononuclear Necrosis	Mild
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 424

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-424

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Blood Vessel	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Adenoma	
Note: PAPILLOMA ON THE SKIN ADJACENT TO THE ADENOMA.			
Note: ONLY ONE GLAND IS AFFECTED, BUT THERE IS A SQUAMOUS			
[Adenoma TGLS = 1-12]			
* Kidney		Inflammation	Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
	Nasolacrim Dct	Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Minimal
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 2-5]			
* Thymus		Thymoma Benign	
[Thymoma Benign TGLS = 3-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 425

TRT#: 8

SEX: Female

DAY ON TEST: 720

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-425

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach

Hyperplasia

Mild

Leukemia Mononuclear

Ulcer

Moderate

[Ulcer TGLS = 5-13,4-4,13]

* Stomach, Glandular

Leukemia Mononuclear

Ulcer

Moderate

[Ulcer TGLS = 5-13,4-4,13]

* Thymus

Atrophy

Moderate

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 426

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-426

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Lung | * 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 | | Hyperplasia | Mild |
| * Heart | | Cardiomyopathy | Minimal |
| * Kidney | | Nephropathy | Chronic, Moderate |
| * Liver | | Basophilic Focus | Mild |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 1-3] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 427

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-427

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* 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

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Mild
* Bone Marrow		Myelofibrosis	Mild
* Brain		Compression	Mild
* Clitoral Gland		Inflammation	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
Lymph Node	Mediastinal	Hemorrhage	Moderate
	Mediastinal	Pigmentation	Moderate
[Hemorrhage TGLS = 1-12]			
[Pigmentation TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 428

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-428

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea

OBSERVATIONS

* Clitoral Gland		Inflammation	Marked
[Inflammation TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Infiltration Cellular	Lymphocyte, Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mediastinal	Hemorrhage	Mild
[Hemorrhage TGLS = 3-12]	Mediastinal	Pigmentation	Mild
[Pigmentation TGLS = 3-12]			
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
[Hyperplasia TGLS = 4-3.1]	Pars Distalis	Hyperplasia	Mild
* Urinary Bladder		Infiltration Cellular	Lymphocyte, Minimal
* Uterus		Dilatation	Moderate
[Dilatation TGLS = 2-9]		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 429

TRT#: 8

SEX: Female

DAY ON TEST: 383

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-429

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex

* Bone Marrow

* Heart

* Intestine Small, Duodenum

* Liver

* Mammary Gland

* Pituitary Gland

* Thyroid Gland

* Adrenal Medulla

* Brain

* Intestine Large, Cecum

* Intestine Small, Ileum

* Lung

* Nose

* Salivary Glands

* Trachea

* Blood Vessel

* Clitoral Gland

* Intestine Large, Colon

* Intestine Small, Jejunum

* Lymph Node, Mandibular

* Ovary

* Skin

* Urinary Bladder

* Bone

* Esophagus

* Intestine Large, Rectum

* Islets, Pancreatic

* Lymph Node, Mesenteric

* Parathyroid Gland

* Stomach, Glandular

* Uterus

AUTO PRECLUDES DIAG.

* Stomach, Forestomach

OBSERVATIONS

* Kidney

* Pancreas

* Spleen

* Thymus

Acinar Cell

Nephropathy

Atrophy

Pigmentation

Hemorrhage

Chronic, Minimal

Mild

Moderate

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 430

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-430

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Infiltration Cellular	Lymphocyte, Focal, Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Thymus		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 431

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-431

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex	Capsule	Inflammation	Mild
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Infiltration Cellular	Lymphocyte, Minimal
		Inflammation	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Mild
[Cyst TGLS = 1-9]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 432

TRT#: 8

SEX: Female

DAY ON TEST: 718

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-432

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Cytoplasmic Alteration	Minimal
* Bone Marrow		Hyperplasia	Moderate
* Clitoral Gland		Ectasia	Mild
Eye		Hemorrhage	Marked
	Cornea	Inflammation	Marked
	[Hemorrhage TGLS = 4-13]		
	[Inflammation TGLS = 4-13]		
Harderian Gland		Infiltration Cellular	Lymphocyte, Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Leukocytosis	Mild
* Lung		Inflammation	Minimal
* Lymph Node, Mandibular		Hemorrhage	Mild
		Hyperplasia	Plasma Cell, Mild
	[Hyperplasia TGLS = 1-2]		
* Mammary Gland		Hyperplasia	Mild
		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Marked
* Ovary	Corpus Luteum	Hypertrophy	Moderate
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
	[Angiectasis TGLS = 6-3,5-3]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 432

TRT#: 8

SEX: Female

DAY ON TEST: 718

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-432

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 5-3,6-3]		
* Spleen	Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 2-5]		
* Stomach, Forestomach	Ulcer	Moderate
* Stomach, Glandular	Necrosis	Mild
* Thymus	Atrophy	Minimal
Zymbal's Gland	Carcinoma	
[Carcinoma TGLS = 7-12]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 433

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-433

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Kidney	* Liver	* 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	* Uterus

OBSERVATIONS

* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
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PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 434

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-434

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Minimal
* Lung		Inflammation	Minimal
Lymph Node	Mediastinal	Hemorrhage	Moderate
[Hemorrhage TGLS = 3-12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Ovary		Cyst	Moderate
[Cyst TGLS = 2-9]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 4-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 435

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-435

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* 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	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Mild
* Mammary Gland		Fibroadenoma	Multiple
		Hyperplasia	Mild
		Lactation	Moderate
[Fibroadenoma TGLS = 2-13,1-12]			
[Hyperplasia TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-3,3.1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 436

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-436

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone Marrow	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Minimal
* Bone	Cranium	Hyperostosis	Mild
	Femur	Hyperostosis	Marked
	Turbinates	Hyperostosis	Moderate
	[Hyperostosis TGLS = 2-12,2-12,2-12]		
	[Hyperostosis TGLS = 2-12,2-12,2-12]		
	[Hyperostosis TGLS = 2-12,2-12,2-12]		
* Brain		Compression	Mild
* Clitoral Gland		Hyperplasia	Moderate
	[Hyperplasia TGLS = 1-9]		
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Mild
		Inflammation	Minimal
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
	[Adenoma TGLS = 3-3]		
	[Angiectasis TGLS = 3-3]		
* Thymus		Atrophy	Minimal
* Thyroid Gland	C Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 436

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-436

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 437

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-437

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * 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 | * Uterus | | |

OBSERVATIONS

- | | | | |
|---------------------|---------------|------------------------|---------------|
| * Clitoral Gland | | Hyperplasia | Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Minimal |
| | | Inflammation | Minimal |
| * Lung | | Inflammation | Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| * Ovary | | Cyst | Marked |
| [Cyst TGLS = 1-9] | | | |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 438

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-438

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* 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	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Nasolacrim Dct	Inflammation	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 439

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-439

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Urinary Bladder			

OBSERVATIONS

* Bone	Cranium	Hyperostosis	Moderate
	Femur	Hyperostosis	Mild
	[Hyperostosis TGLS = 2-13,2-13]		
	[Hyperostosis TGLS = 2-13,2-13]		
* Clitoral Gland		Ectasia	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
		Inflammation	Minimal
Lymph Node	Mediastinal	Hemorrhage	Moderate
	[Hemorrhage TGLS = 1-12]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Trachea		Infiltration Cellular	Lymphocyte, Mild
* Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 440

TRT#: 8

SEX: Female

DAY ON TEST: 638

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-440

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
Eye		Phthisis Bulbi	Moderate
[Phthisis Bulbi TGLS = 1-12]			
* Intestine Large, Cecum		Inflammation	Granulomatous, Marked
[Inflammation TGLS = 3-13]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Congestion	Mild
* Mammary Gland		Lactation	Mild
* Pancreas	Acinar Cell	Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Cyst	Moderate
[Cyst TGLS = 2-3]			
* Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 441

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-441

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Hypertrophy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Inflammation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Inflammation	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-3]			
* Thymus		Atrophy	Minimal
* Uterus		Dilatation	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 442

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-442

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Mild
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-6]			
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
Mesentery		Leukemia Mononuclear	
	Fat	Necrosis	Mild
[Leukemia Mononuclear TGLS = 5-15]			
[Necrosis TGLS = 5-15]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas		Accessory Spleen	
	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
[Accessory Spleen TGLS = 4-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 442

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-442

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland

Leukemia Mononuclear

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-5,12]

* Thymus

Atrophy

Mild

* Thyroid Gland

C Cell

Adenoma

C Cell

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 443

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-443

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Cortex		Cytoplasmic Alteration	Mild
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	Moderate
[Hepatodiaphragmatic Nodule TGLS = 3-13]			
* Lung		Infiltration Cellular	Histiocyte, Minimal
		Inflammation	Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Thyroid Gland	Follicular Cel	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 444

TRT#: 8

SEX: Female

DAY ON TEST: 719

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-444

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Esophagus
* Intestine Large, Rectum	* Islets, Pancreatic	* Parathyroid Gland	* Skin
* Urinary Bladder			

AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
-----------------------------	--------------------------	----------------------------

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Mild
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4,5-5]		
* Lung		Alveolar/Bronchiolar Adenoma	
		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-12]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-12]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-12]		
* Mammary Gland		Lactation	Mild
		Leukemia Mononuclear	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Leukemia Mononuclear	
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 444

TRT#: 8

SEX: Female

DAY ON TEST: 719

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-444

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3]			
* Salivary Glands		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Stomach, Forestomach		Leukemia Mononuclear	
* Stomach, Glandular		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Trachea		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 445

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-445

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * 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 |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Mild |
| * Lung | | Inflammation | Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| | | Inflammation | Minimal |
| * Pancreas | Acinar Cell | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 446

TRT#: 8

SEX: Female

DAY ON TEST: 714

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-446

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Islets, Pancreatic	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Blood Vessel	Aorta	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear Necrosis	Mild
[Leukemia Mononuclear TGLS = 9-7]			
[Necrosis TGLS = 9-7]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-5]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
Lymph Node	Mediastinal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12,1-2,7-14]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12,1-2,7-14]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12,1-2,7-14]			
* Mammary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 446

TRT#: 8

SEX: Female

DAY ON TEST: 714

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-446

ORGAN AND ACCOUNTABLE SITE STATUS

* Nose	Olfactory Epi	Cytoplasmic Alteration Leukemia Mononuclear	Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-3]		
* Spleen		Leukemia Mononuclear Necrosis	Marked
	[Leukemia Mononuclear TGLS = 5-5]		
	[Necrosis TGLS = 6-5]		
* Thymus		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear Polyp Stromal	
	[Leukemia Mononuclear TGLS = 10-14]		
	[Polyp Stromal TGLS = 10-14]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 447

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-447

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|------------------------|---------------|------------------------|---------------------|
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Mild |
| * Lung | | Infiltration Cellular | Histiocyte, Minimal |
| * Mammary Gland | | Hyperplasia | Mild |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Minimal |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 1-3] | | | |
| * Thymus | | Atrophy | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 448

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-448

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
		Inflammation	Minimal
* Lung		Inflammation	Minimal
* Mammary Gland		Fibroadenoma	Multiple
		Hyperplasia	Mild
		Lactation	Mild
[Fibroadenoma TGLS = 1-12,2-13,3-14]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal
[Cyst TGLS = 6-3]			
* Spleen		Congestion	Mild
		Hematopoietic Cell Proliferation	Minimal
[Congestion TGLS = 5-5]			

* Uterus

Note: THE UTERINE NODULE (L4) DESCRIBED MAY BE

Note: HYPERPLASTIC CLITORAL GLAND.

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 449

TRT#: 8

SEX: Female

DAY ON TEST: 684

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-449

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-5]	
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-12]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-12]	
* Mammary Gland		Lactation	Mild
		[Lactation TGLS = 1-13,2-14]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 6-3]	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 449

TRT#: 8

SEX: Female

DAY ON TEST: 684

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-449

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 5-5]

* Stomach, Forestomach

Hyperplasia

Minimal

* Stomach, Glandular

Leukemia Mononuclear

* Thymus

Leukemia Mononuclear

Atrophy

Mild

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 450

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-450

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* 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	Focal, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
		Fatty Change	Mild
* Lung		Alveolar/Bronchiolar Carcinoma	
		Infiltration Cellular	Histiocyte, Minimal
		[Alveolar/Bronchiolar Carcinoma TGLS = 2-13]	
* Mammary Gland		Fibroadenoma	
		[Fibroadenoma TGLS = 1-12]	
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
		[Angiectasis TGLS = 3-3]	
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 451

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-451

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Medulla | * Blood Vessel | * Bone | * Bone Marrow |
| * Brain | * Esophagus | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * 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 | | Vacuolization Cytoplasmic | Focal, Mild |
| * Clitoral Gland | | Ectasia | Mild |
| [Ectasia TGLS = 3-9] | | | |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Moderate |
| | | Inflammation | Minimal |
| * Lung | | Inflammation | Minimal |
| * Mammary Gland | | Hyperplasia | Moderate |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| | Pars Distalis | Cyst | Moderate |
| [Adenoma TGLS = 2-3] | Pars Distalis | Hyperplasia | Mild |
| Vagina | | Inflammation | Mild |
| [Prolapse TGLS = 1-12] | | Prolapse | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 452

TRT#: 8

SEX: Female

DAY ON TEST: 698

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-452

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lymph Node, Mandibular
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Mild
		Vacuolization Cytoplasmic	Focal, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Congestion	Mild
		Fatty Change	Mild
* Lung		Inflammation	Minimal
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
Oral Mucosa	Buccal	Squamous Cell Carcinoma	
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
* Spleen		Pigmentation	Mild
* Thymus		Atrophy	Moderate
Tongue		Inflammation	Mild

[Inflammation TGLS = 4,5-13,14]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 453

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-453

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 454

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-454

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic	* Lung
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Focal, Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Inflammation	Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Ovary		Inflammation	Granulomatous, Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
	Pars Distalis	Hyperplasia	Mild

[Cyst TGLS = 1-3]

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 455

TRT#: 8

SEX: Female

DAY ON TEST: 664

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-455

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland	* Pancreas
* Salivary Glands	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
Eye	Lens	Cataract	Mild
	Retina	Degeneration	Marked
	[Cataract TGLS = 5-13]		
	[Degeneration TGLS = 5-13]		
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3,8,9-5]		
* Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,7-2,4-12]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,7-2,4-12]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-8,7-2,4-12]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 455

TRT#: 8

SEX: Female

DAY ON TEST: 664

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-455

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary	Leukemia Mononuclear
* Pituitary Gland	Leukemia Mononuclear
* Spleen	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 1-5]	
* Stomach, Forestomach	Ulcer
* Thymus	Leukemia Mononuclear
* Uterus	Polyp Stromal

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 456

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-456

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland	* Thymus
---------------------	----------

OBSERVATIONS

* Kidney	Nephropathy	Chronic, Minimal
* Lung	Inflammation	Minimal
* Nose	Olfactory Epi	Mild
	Cytoplasmic Alteration	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 457

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-457

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Degeneration	Mild
* Bone Marrow		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Mandibular		Hyperplasia	Plasma Cell, Moderate
[Hyperplasia TGLS = 1-2]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Uterus		Dilatation	Moderate
[Dilatation TGLS = 3-9]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 458

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-458

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lung	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Accessory Adrenal Cortical Nodule	Mild
[Accessory Adrenal Cortical Nodule TGLS = 3-3]			
* Bone Marrow		Hemorrhage	Minimal
* Brain		Compression	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Developmental Malformation	Mild
		Inflammation	Minimal
[Developmental Malformation TGLS = 4-12]			
* Lymph Node, Mandibular		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Minimal
		Lactation	Minimal
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-3]			
* Thymus		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 459

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-459

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* 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

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
		Edema	Focal, Mild
* Pituitary Gland	Pars Distalis	Pigmentation	Mild
[Pigmentation TGLS = 1-3]			
* Uterus		Dilatation	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 460

TRT#: 8

SEX: Female

DAY ON TEST: 473

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-460

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Bone Marrow
* Heart
* Intestine Small, Duodenum
* Liver
* Mammary Gland
* Pituitary Gland
* Stomach, Forestomach
* Urinary Bladder

* Adrenal Medulla
* Brain
* Intestine Large, Cecum
* Intestine Small, Ileum
* Lung
* Ovary
* Salivary Glands
* Stomach, Glandular

* Blood Vessel
* Clitoral Gland
* Intestine Large, Colon
* Intestine Small, Jejunum
* Lymph Node, Mandibular
* Pancreas
* Skin
* Thyroid Gland

* Bone
* Esophagus
* Intestine Large, Rectum
* Islets, Pancreatic
* Lymph Node, Mesenteric
* Parathyroid Gland
* Spleen
* Trachea

OBSERVATIONS

* Kidney
* Nose
[Hyperplasia TGLS = 1-12]
* Thymus
* Uterus

Olfactory Epi
Nares

Nephropathy
Cytoplasmic Alteration
Hyperplasia
Atrophy
Polyp Stromal

Chronic, Mild
Mild
Marked
Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 461

TRT#: 8

SEX: Female

DAY ON TEST: 631

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-461

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Brain		Compression	Moderate
		Hydrocephalus	Mild
		Ectasia	Mild
* Clitoral Gland			
[Ectasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Minimal
		Fatty Change	Minimal
		Inflammation	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 462

TRT#: 8

SEX: Female

DAY ON TEST: 725

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-462

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Bone Marrow	Myeloid Cell	Hyperplasia	Mild
* Clitoral Gland		Ectasia	Moderate
* Liver		Congestion	Mild
* Lung		Congestion	Mild
[Congestion TGLS = 3-6]			
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Mild
		Lactation	Mild
[Fibroadenoma TGLS = 1-12,2-13]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
	Nasolacrim Dct	Inflammation	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 4-3]			
* Stomach, Forestomach		Ulcer	Moderate
* Thymus		Atrophy	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 463

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-463

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * 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 |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Lung | | Infiltration Cellular | Histiocyte, Minimal |
| | | Inflammation | Minimal |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-12] | | | |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Moderate |
| * Thymus | | Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 464

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-464

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
Eye	Lens	Cataract	Mild
	Retina	Degeneration	Moderate
[Cataract TGLS = 4-13]			
[Degeneration TGLS = 4-13]			
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Adenoacanthoma	
		Lactation	Mild
[Adenoacanthoma TGLS = 1-12]			
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 465

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-465

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Lymphocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-3]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 466

TRT#: 8

SEX: Female

DAY ON TEST: 624

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-466

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lung
* Lymph Node, Mandibular	* Ovary	* Salivary Glands	* Skin
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
[Ectasia TGLS = 1-9]			
* Liver		Clear Cell Focus	Moderate
		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland		Developmental Malformation	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-5]			
* Stomach, Forestomach		Ulcer	Mild
* Stomach, Glandular		Fibrosis	Focal, Mild
* Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 467

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-467

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland	* Thymus
---------------------	----------

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Focal, Mild
* Clitoral Gland		Ectasia	Mild
		Hyperplasia	Mild
[Ectasia TGLS = 1-9]			
[Hyperplasia TGLS = 1-9]			
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Mild
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
[Cyst TGLS = 2-3]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 468

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-468

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Bone Marrow		Hyperplasia	Mild
* Clitoral Gland		Ectasia	Mild
[Ectasia TGLS = 2-9]			
* Heart		Cardiomyopathy	Minimal
* Liver		Basophilic Focus	Mild
		Inflammation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Cyst TGLS = 3-3]			
[Hyperplasia TGLS = 3-3]			
* Spleen		Hematopoietic Cell Proliferation	Mild
		Hyperplasia	Lymphoid, Mild
[Hyperplasia TGLS = 1-5]			
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 469

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-469

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Islets, Pancreatic |
| * 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

- | | | | |
|------------|---------------|------------------------|---------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| * Lung | | Infiltration Cellular | Histiocyte, Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Pancreas | Acinar Cell | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 470

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-470

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* 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		

MISSING

* Thymus

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Mild
		Eosinophilic Focus	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Cyst	Moderate
[Cyst TGLS = 4-3]			
* Uterus		Dilatation	Mild
	Endometrium	Hyperplasia	Mild
[Dilatation TGLS = 1-12]			
[Hyperplasia TGLS = 3-12]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 472

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-472

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Kidney	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Nose	Olfactory Epi	Cytoplasmic Alteration	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 473

TRT#: 8

SEX: Female

DAY ON TEST: 444

DOSE: 1600 PPM

DISP: Moribund Sacrifice

HISTO: MB070G-473

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Uterus		

MISSING

* Urinary Bladder

OBSERVATIONS

* Kidney		Mineralization	Minimal
* Liver		Basophilic Focus	Minimal
* Lung		Infiltration Cellular	Histiocyte, Minimal
* Nose	Olfactory Epi	Atrophy	Focal, Mild
	Olfactory Epi	Cytoplasmic Alteration	Minimal
		Inflammation	Mild
		Sarcoma	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 474

TRT#: 8

SEX: Female

DAY ON TEST: 736

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-474

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Blood Vessel	* Bone Marrow	* Brain
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Mandibular	* Salivary Glands
--------------------------	-------------------

OBSERVATIONS

* Adrenal Cortex		Angiectasis	Mild
* Bone	Cranium	Hyperostosis	Moderate
	Femur	Hyperostosis	Mild
			[Hyperostosis TGLS = 1-12,1-12]
			[Hyperostosis TGLS = 1-12,1-12]
* Clitoral Gland		Ectasia	Mild
		Inflammation	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Mammary Gland		Lactation	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
			[Adenoma TGLS = 2-3]
* Thymus		Atrophy	Moderate
		Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 475

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-475

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* 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	* Islets, Pancreatic
* Kidney	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Liver		Basophilic Focus	Minimal
* Nose	Olfactory Epi	Cytoplasmic Alteration	Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Thymus		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 476

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-476

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Bone Marrow
* Heart
* Intestine Small, Duodenum
* Liver
* Mammary Gland
* Salivary Glands
* Stomach, Glandular
* Urinary Bladder

* Adrenal Medulla
* Brain
* Intestine Large, Cecum
* Intestine Small, Ileum
* Lung
* Ovary
* Skin
* Thymus
* Uterus

* Blood Vessel
* Clitoral Gland
* Intestine Large, Colon
* Intestine Small, Jejunum
* Lymph Node, Mandibular
* Pancreas
* Spleen
* Thyroid Gland

* Bone
* Esophagus
* Intestine Large, Rectum
* Islets, Pancreatic
* Lymph Node, Mesenteric
* Pituitary Gland
* Stomach, Forestomach
* Trachea

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney
* Nose

Olfactory Epi

Nephropathy
Cytoplasmic Alteration
Inflammation

Chronic, Minimal
Mild
Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 477

TRT#: 8

SEX: Female

DAY ON TEST: 702

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-477

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Islets, Pancreatic	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

MISSING

* Thymus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum
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OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Ectasia	Moderate
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-5]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-6]		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-12]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-12]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-12]		
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 7-13]		
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 477

TRT#: 8

SEX: Female

DAY ON TEST: 702

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-477

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary

Cyst

Mild

Leukemia Mononuclear

Note: REALLY PART OF THE MESENTERIC FAT MASS.

Note: WHAT WAS THOUGHT TO BE AN OVARIAN MASS WAS

[Cyst TGLS = 6-13]

* Pancreas

Leukemia Mononuclear

* Pituitary Gland

Leukemia Mononuclear

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 5-5]

* Thyroid Gland

C Cell

Adenoma

* Uterus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 478

TRT#: 8

SEX: Female

DAY ON TEST: 617

DOSE: 1600 PPM

DISP: Natural Death

HISTO: MB070G-478

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Brain | * Esophagus | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Kidney | * Lymph Node, Mandibular | * Mammary Gland | * Ovary |
| * Parathyroid Gland | * Pituitary Gland | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

AUTO PRECLUDES DIAG.

- * Intestine Small, Ileum

OBSERVATIONS

- | | | | |
|-------------------------------------|---------------|------------------------|----------|
| * Bone Marrow | | Hyperplasia | Mild |
| * Clitoral Gland | | Ectasia | Mild |
| [Ectasia TGLS = 3-9] | | | |
| * Heart | | Cardiomyopathy | Mild |
| * Liver | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | | Hemorrhage | Minimal |
| * Nose | Olfactory Epi | Cytoplasmic Alteration | Mild |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Spleen | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-5] | | | |
| * Thymus | | Atrophy | Moderate |
| | | Hemorrhage | Mild |

PRIMARY CAUSE OF DEATH

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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Codeine
CAS Number: 76-57-3

Date Report Requested: 10/21/2014
Time Report Requested: 17:38:56
First Dose M/F: NA / NA
Lab: MBA

ANIMAL ID: 479

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1600 PPM

DISP: Terminal Sacrifice

HISTO: MB070G-479

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
Eye	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Thymus

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Minimal
		Inflammation	Minimal
* Mammary Gland		Lactation	Mild
* Nose	Olfactory Epi	Cytoplasmic Alteration	Minimal
* Skin	Subcut Tiss	Fibroma	

[Fibroma TGLS = 1-12]

PRIMARY CAUSE OF DEATH

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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05068-09

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Codeine

CAS Number: 76-57-3

Date Report Requested: 10/21/2014

Time Report Requested: 17:38:56

First Dose M/F: NA / NA

Lab: MBA

ANIMAL ID: 480

TRT#: 8

SEX: Female

DAY ON TEST: 456

DOSE: 1600 PPM

DISP: Scheduled Sacrifice

HISTO: MB070G-480

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* 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

* Clitoral Gland		Ectasia	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Inflammation	Minimal
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

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** END OF REPORT **