

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

C Number:	C55878
Lock Date:	Not Entered.
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	06/27/1990

Experiment Number: 05002-05

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Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

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CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 1	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031504

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* 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	* Nose
* Pancreas	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Gland	Cortex Medulla	Hyperplasia Pheochromocytoma Benign	Focal, Moderate
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Cecum	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus Eosinophilic Focus	Multiple, Minimal
	Bile Duct	Hyperplasia Inflammation	Mild Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	Granulomatous, Multiple, Minimal
Note: ADENOMA TGLs = 1-9			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 2	TRT#: 1 DOSE: VEHICLE CONTROL	SEX: Male DISP: Dead	DAY ON TEST: 575 HISTO: A83028595
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* 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	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Brain Note: HEMORRHAGE TGLs = 4-1		Hemorrhage	Mild
* Eye Note: DEGEN TGLs = 1-12	Retina	Degeneration	Mild
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Lung Note: CONGESTION TGLs = 2-4		Congestion	Marked
* Pituitary Gland [Carcinoma TGLS = 4-1,3-1]	Pars Distalis Pars Distalis	Angiectasis Carcinoma	Marked
* Preputial Gland		Inflammation	Suppurative, Moderate
* Prostate		Inflammation	Suppurative, Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 3	TRT#: 1	SEX: Male	DAY ON TEST: 674
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83029780

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* 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	* Nose
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Gland	Cortex	Hyperplasia	Focal, Mild
	Cortex	Vacuolization Cytoplasmic	Mild
* Brain		Compression	Marked
[Compression TGLS = 6-1]			
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Moderate
Note: NEPHROPATHY	TGLs = 3-6		
* Liver	Bile Duct	Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Moderate
Note: VACUOLIZ CYTO	TGLs = 4-5		
* Mammary Gland	Duct	Cyst	Moderate
		Fibroadenoma	
Note: CYST	TGLs = 2,1-8		
Note: FIBROADENOMA	TGLs = 2		
Note: TGL 2 ON SLIDE (I) SUBCUTIS (I) AS TISSUE NOS IS MAMMARY GL.			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Atrophy	Mild
* Prostate		Inflammation	Suppurative, Moderate
* Stomach	Forestomach	Edema	Marked
	Epithelium, Forestomach	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
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Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 3	TRT#: 1 DOSE: VEHICLE CONTROL	SEX: Male DISP: Moribund	DAY ON TEST: 674 HISTO: A83029780
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ORGAN AND ACCOUNTABLE SITE STATUS			
* Testes	Forestomach Interstit Cell	Inflammation Hyperplasia	Chronic, Moderate Mild

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 4	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031505

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|------------------------------|---------------------------|-----------------------------|
| * Adrenal Gland - Cortex | * Bone | * Bone Marrow | * Brain |
| * Epididymis | * Esophagus | * Intestine Large - Cecum | * Intestine Large - Colon |
| * Intestine Large - Rectum | * Intestine Small - Duodenum | * Intestine Small - Ileum | * Intestine Small - Jejunum |
| * Islets, Pancreatic | * Lymph Node - Mandibular | * Lymph Node - Mesenteric | * Nose |
| * 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

- | | | | |
|------------------------------------|---------------------------|-------------------------|-------------------|
| * Adrenal Gland | Medulla | Pheochromocytoma Benign | |
| * Heart | | Inflammation | Chronic, Moderate |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | Bile Duct | Basophilic Focus | Multiple, Mild |
| | | Hyperplasia | Minimal |
| | | Mixed Cell Focus | Mild |
| * Lung | | Congestion | Mild |
| Note: CONGESTION TGLs = 3-4 | | | |
| * Mammary Gland | Duct | Cyst | Moderate |
| Note: CYST TGLs = 1-10 | | | |
| Note: TGL 1-SKIN-IS MAMMARY GLAND. | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| Note: ADENOMA TGLs = 2-9 | | | |
| Uterus | | | |
| Note: SLIDE 9-1 UTERUS CERVIX. | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 5	TRT#: 1	SEX: Male	DAY ON TEST: 580
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83028679

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
Ear	* 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	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	Spinal Cord	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

MISSING

* Lymph Node - Mandibular

OBSERVATIONS

* Brain		Meningioma Malignant	
[Meningioma Malignant TGLS = 1-1]			
Ear			
Note: EXTERNAL EAR APPEARED NORMAL.			
* Heart		Inflammation	Chronic, Mild
* Kidney		Infarct	Moderate
		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Mild
Mesentery			
Note: TGL 1 IS ON SLIDE (I).			
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
	Pars Distalis	Hyperplasia	Focal, Mild
[Cyst TGLS = 2-1]			
[Hyperplasia TGLS = 2-1]			
Spinal Cord			
Note: TERMINAL SPINAL CORD NORMAL.			
* Testes	Bilateral, Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 5

TRT#: 1

SEX: Male

DAY ON TEST: 580

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028679

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 6	TRT#: 1 DOSE: VEHICLE CONTROL	SEX: Male DISP: Moribund	DAY ON TEST: 465 HISTO: A83027885
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone Marrow	* 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
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
Tooth	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
* Bone	Cranium	Carcinoma	Metastatic (Zymbal'S Gland)
Note: CARCINOMA TGLs = 6-1 Note: BONE IS ON SLIDE MARKED HEAD.			
* Brain	Meninges	Carcinoma	Metastatic (Zymbal'S Gland)
	Nerve	Carcinoma	Metastatic (Zymbal'S Gland)
		Hemorrhage	Moderate
Note: CARCINOMA TGLs = 5 Note: TGL 5-CARCINOMA INVADING NERVES IS ON SLIDE MARKED HEAD-A Note: NERVE IS ON SLIDE MARKED HEAD.			
Eye	Retina	Degeneration	Marked
		Hemorrhage	Marked
		Inflammation	Suppurative, Marked
Note: INFLAMMATION TGLs = 1 Note: EYE IS ON SLIDE "J".			
Harderian Gland		Pigmentation	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Nose	Lumen	Inflammation	Suppurative, Mild
* Preputial Gland		Inflammation	Suppurative, Moderate
* Testes	Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 6	TRT#: 1	SEX: Male	DAY ON TEST: 465
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83027885

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA TGLs = 2-7 Zymbal's Gland	Atrophy	Mild
Note: CARCINOMA TGLs = 3 Note: EAR MASS IS ZYMBALS GLAND-IS ON SLIDE MARKED HEAD. Note: TGL 3 IS ON SLIDE I.	Carcinoma	

PRIMARY CAUSE OF DEATH	-
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Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 7	TRT#: 1 DOSE: VEHICLE CONTROL	SEX: Male DISP: Moribund	DAY ON TEST: 700 HISTO: A84031506
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Mammary Gland	* Nose
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach - Forestomach	* Stomach - Glandular	* Trachea

OBSERVATIONS

* Adrenal Gland	Medulla Cortex Medulla	Hyperplasia Leukemia Mononuclear Leukemia Mononuclear	Focal, Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Cecum	Leukemia Mononuclear	
* Kidney	Transit Epithe	Carcinoma Leukemia Mononuclear	
* Liver	Bile Duct	Hyperplasia Hyperplasia Leukemia Mononuclear Vacuolization Cytoplasmic	Minimal Nodular, Moderate Mild
Note: LEUKEMIA MONUC TGLs = 6-5 Note: HYPERPLASIA TGLs = 6-5 [Leukemia Mononuclear TGLS = 6-5]			
* Lung	Alveolar Epith	Hyperplasia Leukemia Mononuclear	Moderate
Note: LEUKEMIA MONUC TGLs = 7-4 [Leukemia Mononuclear TGLS = 8-4-1]			
* Lymph Node	Inguinal Mandibular Mediastinal Mesenteric	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 10-8			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 7	TRT#: 1	SEX: Male	DAY ON TEST: 700
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A84031506

ORGAN AND ACCOUNTABLE SITE STATUS

Note: LEUKEMIA MONUC TGLs = 10-2 Note: LEUKEMIA MONUC TGLs = 10-10-1 Note: LEUKEMIA MONUC TGLs = 10-2 Mesentery		Leukemia Mononuclear Necrosis	Focal, Moderate
Note: LEUKEMIA MONUC TGLs = 3 Note: TGL 3 IS ON SLIDE I. * Pancreas * Preputial Gland	Fat Duct	Leukemia Mononuclear Adenoma Cyst	Moderate
Note: CYST TGLs = 1-15 Note: ADENOMA TGLs = 1-15 * Prostate * Spleen Note: LEUKEMIA MONUC TGLs = 4-2-1 Note: TGL 4 IS ON SLIDE 2-1. * Testes Note: ADENOMA TGLs = 2-9 * Thymus [Leukemia Mononuclear TGLS = 10-2]	Bilateral, Interstit Cell	Leukemia Mononuclear Leukemia Mononuclear Adenoma Leukemia Mononuclear	
* Thyroid Gland Note: ADENOMA TGLs = 9-3 * Urinary Bladder	Follicular Cel	Adenoma Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 8	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031507

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	Eye
* 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
* Pituitary Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

Eye			
Note: EYE-SLIDE 44-IS NORMAL.			
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lung		Foreign Body	Mild
		Inflammation	Suppurative, Moderate
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 4-23			
* Parathyroid Gland		Hyperplasia	Mild
* Preputial Gland		Inflammation	Suppurative, Moderate
* Skin		Cyst	
Note: CYST TGLs = 1-21		Keratoacanthoma	
Note: KERATOACANTHOMA TGLs = 2-22			
Note: EYE IS SKIN OF EYELID WITH CYST PRESENT.			
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 3-9			

* PROTOCOL REQUIRED TISSUE

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Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 8	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031507

ORGAN AND ACCOUNTABLE SITE STATUS

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

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
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CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 9

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031508

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large - Cecum	* 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	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Moderate
* Intestine Large	Colon	Parasite Metazoan	
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Clear Cell Focus	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-5			
* Lung		Congestion	Mild
		Foreign Body	Mild
Note: CONGESTION TGLs = 4-4			
* Lymph Node	Pancreatic	Hyperplasia	Lymphoid, Mild
Note: HYPERPLASIA TGLs = 2-21			
* Mammary Gland		Fibroadenoma	
Note: SLIDE 21 - SKIN IS MAMMARY GLAND.			
* Nose	Lumen	Fungus	Mild
	Lumen	Inflammation	Suppurative, Mild
* Pancreas	Acinar Cell	Adenoma	Multiple
Note: ADENOMA TGLs = 2-21			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

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Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 9	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031508

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes Note: ADENOMA TGLs = 1-9	Bilateral, Interstit Cell	Adenoma
* Thyroid Gland	C Cell	Adenoma
PRIMARY CAUSE OF DEATH	-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 618

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029051

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
	Cortex	Vacuolization Cytoplasmic	Marked
	Medulla	Vacuolization Cytoplasmic	Marked
* Heart		Inflammation	Chronic, Mild
* Intestine Small	Jejunum	Adenocarcinoma	
Note: ADENOCARC TGLs = 4,5			
Note: TGL 4&5 ARE ON SLIDE II			
* Liver		Clear Cell Focus	Minimal
		Hepatodiaphragmatic Nodule	Mild
	Bile Duct	Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Mild
Note: ANOM HEPAT LOB TGLs = 7			
Note: TGL 7 IS ON SLIDE III			
Note: CLEAR CELL FOCUS ON SLIDE III			
Note: VACUOLIZ CYTO TGLs = 6-5			
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Adenoma	
	Duct	Cyst	Moderate
Note: TGL 1 IS ON SLIDE I AND 7B			
Note: ADENOMA TGLs = 1			
[Adenoma TGLS = 1]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 618

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029051

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA TGLs = 2-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031509

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum
* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node - Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach - Forestomach	* Thymus	* Thyroid Gland	* Trachea

MISSING

* Urinary Bladder

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Lymph Node	Inguinal	Hyperplasia	Lymphoid, Mild
	Mandibular	Hyperplasia	Lymphoid, Moderate
* Pancreas	Acinar Cell	Adenoma	Multiple
	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
[Angiectasis TGLS = 6-1]			
* Preputial Gland		Carcinoma	
	Duct	Cyst	Marked
		Inflammation	Suppurative, Moderate
Note: CARCINOMA	TGLs = 2-21-1,3-21		
Note: CYST	TGLs = 3-21-1		
Note: INFLAMMATION	TGLs = 2-21-1,3-21		
* Skin			
Note: TGL 2-21 IS PREPUTIAL GLAND			
* Spleen		Fibrosarcoma	
		Hyperplasia	Lymphoid, Moderate
Note: FIBROSARC	TGLs = 5-22		
* Stomach	Glandular	Mineralization	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 11	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031509

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 4-9		
Note: HYPERPLASIA	TGLs = 4-9		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 12

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031510

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Pituitary Gland
- * Skin
- * Thyroid Gland

- * Adrenal Gland - Medulla
- * Epididymis
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Mammary Gland
- * Prostate
- * Spleen
- * Trachea

- * Bone
- * Esophagus
- * Intestine Small - Duodenum
- * Lung
- * Nose
- * Salivary Glands
- * Stomach - Forestomach
- * Urinary Bladder

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Parathyroid Gland
- * Seminal Vesicle
- * Stomach - Glandular

MISSING

- * Thymus

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
* Pancreas	Bile Duct Acinar Cell	Hyperplasia Atrophy Polyarteritis	Mild Mild Moderate
Note: POLYARTERITIS	TGLs = 3-5		
* Preputial Gland		Atrophy	Moderate
* Testes	Duct Bilateral, Interstit Cell	Cyst Adenoma Atrophy	Moderate Marked
Note: ATROPHY	TGLs = 1-9		
Note: ADENOMA	TGLs = 2-9		
* Thymus			
Note: NOT FOUND ON RECUT SLIDE.			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 543

DOSE: VEHICLE CONTROL

DISP: Dosing Accident

HISTO: A83028411

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Intestine Large - Rectum	Islets, Pancreatic	Lymph Node - Mandibular	Mammary Gland
Nose	Parathyroid Gland	Salivary Glands	Seminal Vesicle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea		

MISSING

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lymph Node - Mesenteric	Pituitary Gland	Preputial Gland	Thymus
Urinary Bladder			

OBSERVATIONS

Heart		Inflammation	Chronic, Moderate
Kidney		Nephropathy	Chronic, Mild
Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Mild
	Bile Duct	Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Mild
Note: TGL 2 IS HDN ON SLIDE I			
Note: ANOM HEPAT LOB TGLs = 2			
Lung		Congestion	Marked
		Edema	Mild
Note: CONGESTION TGLs = 3-4			
Pancreas	Acinar Cell	Atrophy	Moderate
Prostate		Inflammation	Suppurative, Moderate
Testes	Bilateral, Interstit Cell	Adenoma	
	Bilateral, Interstit Cell	Hyperplasia	Moderate
Note: HYPERPLASIA TGLs = 1-7			
Note: ADENOMA TGLs = 1-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 543

DOSE: VEHICLE CONTROL

DISP: Dosing Accident

HISTO: A83028411

ORGAN AND ACCOUNTABLE SITE STATUS

Animal Note: RECUTS POOR QUALITY.

Animal Note: PROCESSOR MALFUNCTION SLIDE QUALITY POOR.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031511

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Mammary Gland	Duct	Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
Note: [ADENOMA] TGLs = 3-1			
* Preputial Gland		Atrophy	Mild
		Inflammation	Chronic, Moderate
* Prostate		Inflammation	Suppurative, Moderate
* Skin		Fibrosis	Mild
	Epidermis	Hyperplasia	Mild
Note: FIBROSIS TGLs = 4-21			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-9			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031512

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum
* Intestine Small - Duodenum	* Intestine Small - Jejunum	* Islets, Pancreatic	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Medulla	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Mild
* Intestine Small	Ileum	Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hepatodiaphragmatic Nodule	Mild
		Hyperplasia	Mild
		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
Note: HYPERPLASIA TGLs = 5-5			
Note: LEUKEMIA MONUC TGLs = 5-5			
[Hyperplasia TGLs = 6-21]			
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-4			
* Lymph Node	Mandibular	Hyperplasia	Lymphoid, Moderate
	Mediastinal	Hyperplasia	Lymphoid, Moderate
	Mesenteric	Hyperplasia	Lymphoid, Moderate
* Nose	Lumen	Foreign Body	Mild
* Preputial Gland	Duct	Atrophy	Moderate
		Cyst	Mild
		Inflammation	Chronic, Mild
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-2-1,4-2-1			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 15	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031512

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 2-9			
Note: ADENOMA TGLs = 2-9			
Note: ATROPHY TGLs = 1-9			
* Thyroid Gland	C Cell	Carcinoma	
Note: CARCINOMA TGLs = 8-3			

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 16

TRT#: 1

SEX: Male

DAY ON TEST: 681

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029851

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood	* 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	* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Trachea	* Urinary Bladder		

MISSING

* Mammary Gland	* Thymus
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OBSERVATIONS

* Adrenal Gland	Medulla Cortex	Pheochromocytoma Benign Vacuolization Cytoplasmic	Mild
* Bone Marrow		Myelofibrosis	Mild
Eye	Retina	Cataract Degeneration	Moderate Marked
Note: TGL 2 IS ON SLIDE J.			
Note: CATARACT TGLs = 2			
Note: DEGEN TGLs = 2			
* Kidney		Nephropathy	Chronic, Mild
* Liver	Centrilobular Bile Duct	Degeneration Hyperplasia Leukemia Mononuclear Leukemia Mononuclear	Mild Mild
* Lung		Necrosis	Focal, Moderate
Mesentery	Fat		
Note: TGL 4 IS ON SLIDE I.			
Note: NECROSIS TGLs = 4			
* Nose	Lumen Lumen	Fungus Inflammation	Mild Suppurative, Mild
* Preputial Gland	Duct	Atrophy Cyst	Mild Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 16	TRT#: 1	SEX: Male	DAY ON TEST: 681
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83029851

ORGAN AND ACCOUNTABLE SITE STATUS

Note: PREPUTIAL GL ON SLIDE 8.			
* Prostate			
Note: PROSTATE ON 7B.			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 3-7			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 17

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031513

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Cortex	Hypertrophy	Focal, Mild
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Lymph Node			
Note: ON SLIDE 21 IS SKIN-SUBCUTANEOUS TISSUE FIBROMA.			
* Pancreas	Acinar Cell	Adenoma	
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Focal, Mild
* Preputial Gland		Atrophy	Mild
* Skin	Subcut Tiss	Fibroma	
Note: FIBROMA TGLs = 1-21,2-22			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 3-9			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031514

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* 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	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Hyperplasia	Focal, Mild
	Cortex	Hypertrophy	Focal, Mild
	Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Minimal
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
		Eosinophilic Focus	Mild
	Bile Duct	Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 1-21		
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
* Preputial Gland		Adenoma	
		Inflammation	Chronic, Moderate
Note: INFLAMMATION	TGLs = 2-22		
Note: ADENOMA	TGLs = 2-22		
* Prostate		Inflammation	Suppurative, Minimal
* Skin			
Note: TGL 1 SKIN IS ACTUALLY MAMMARY GLAND ON SLIDE 21.			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 3-9		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031514

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 529

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028299

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
	Renal Tubule	Pigmentation	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-5			
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 8-4			
Mesentery	Fat	Necrosis	Focal, Moderate
Note: FAT NECROSIS IS ON SLIDE I.			
Note: TGL 4 IS ON SLIDE I.			
Note: NECROSIS TGLs = 4			
* Prostate		Inflammation	Suppurative, Mild
* Spleen		Leukemia Mononuclear	
Note: TGL 5 IS ON SLIDE 2B.			
Note: LEUKEMIA MONUC TGLs = 5			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 3-7			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 20

TRT#: 1

SEX: Male

DAY ON TEST: 574

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Epididymis	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node - Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3			
Note: ADRENAL GLAND IS ON SLIDE 6B.			
* Bone Marrow		Leukemia Mononuclear	
* Brain	Meninges	Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Moderate
* Intestine Large	Colon	Parasite Metazoan	Mild
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: HYPERPLASIA TGLs = 5-5			
Note: LEUKEMIA MONUC TGLs = 5-5			
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 6-4			
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
* Skin	Subcut Tiss	Fibrosarcoma	
Note: [FIBROSARC] TGLs = 1			
Note: SUBCUTANEOUS MASS-TGL-1 IS ON SLIDE I.			
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-2			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 20

TRT#: 1

SEX: Male

DAY ON TEST: 574

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028596

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA TGLs = 2-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 21

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031515

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|----------------------------|------------------------------|
| * Bone | * Brain | * Epididymis | * Esophagus |
| * Intestine Large - Cecum | * Intestine Large - Colon | * Intestine Large - Rectum | * Intestine Small - Duodenum |
| * Intestine Small - Ileum | * Intestine Small - Jejunum | * Lung | * Lymph Node - Mesenteric |
| * Mammary Gland | * Nose | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Stomach - Forestomach | * Stomach - Glandular |
| * Thymus | * Trachea | * Urinary Bladder | |

MISSING

- * Parathyroid Gland

OBSERVATIONS

- | | | | |
|------------------------------------|------------------------------|--|--------------------|
| * Adrenal Gland | Bilateral, Medulla
Cortex | Pheochromocytoma Benign
Vacuolization Cytoplasmic | Mild |
| * Bone Marrow | | Atrophy | Moderate |
| * Heart | | Inflammation | Chronic, Mild |
| * Islets, Pancreatic | | Adenoma | |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Clear Cell Focus | Minimal |
| | Bile Duct | Hyperplasia | Minimal |
| * Lymph Node | Mandibular | Hyperplasia | Lymphoid, Moderate |
| * Pancreas | Acinar Cell | Hyperplasia | Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| Note: ADENOMA TGLs = 2-1 | | | |
| * Preputial Gland | | Atrophy | Moderate |
| * Spleen | | Hemangiosarcoma | |
| Note: [HEMANGIOSARC] TGLs = 1-21 | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | | Atrophy | Moderate |
| Note: ADENOMA TGLs = 3-9 | | | |
| * Thyroid Gland | C Cell | Hyperplasia | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031516

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Basophilic Focus	Multiple, Mild
		Hyperplasia	Mild
		Leukemia Mononuclear	
Note: HYPERPLASIA TGLs = 4-5			
Note: LEUKEMIA MONUC TGLs = 4-5			
* Lung		Leukemia Mononuclear	
* Lymph Node	Mandibular	Hyperplasia	Lymphoid, Moderate
* Nose	Lumen	Fungus	Mild
	Lumen	Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Prostate		Inflammation	Suppurative, Minimal
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-2			
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Moderate
Note: ATROPHY TGLs = 1-9			
Note: ADENOMA TGLs = 2-9			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031516

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 570

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028671

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Nose
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Mammary Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
Note: NEPHROPATHY TGLs = 3-6			
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Moderate
		Leukemia Mononuclear	
Note: HYPERPLASIA TGLs = 4-5			
[Leukemia Mononuclear TGLs = 4-5]			
* Lung		Leukemia Mononuclear	
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Inflammation	Suppurative, Mild
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2			
Note: TGL 2 ON SLIDE 2B.			
* Testes	Interstit Cell	Adenoma	
	Bilateral, Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031517

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum
* Intestine Small - Ileum	* Intestine Small - Jejunum	* 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

* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
	Bile Duct	Hyperplasia	Minimal
* Nose	Lumen	Fungus	Moderate
	Lumen	Inflammation	Suppurative, Mild
* Pancreas	Acinar Cell	Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Atrophy	Moderate
Note: ATROPHY	TGLs = 1-9		
Note: ADENOMA	TGLs = 2-9		
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 668

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029717

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Lymph Node - Mandibular	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

MISSING

* Islets, Pancreatic	* Lymph Node - Mesenteric
----------------------	---------------------------

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Minimal
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia	Marked
	Centrilobular	Necrosis	Moderate
		Osteosarcoma	Metastatic (Uncertain Primary Site)
Note: [OSTEOSARC] TGLs = 7			
Note: HYPERPLASIA TGLs = 7			
Note: TGL 7 IS ON SLIDE IV.			
* Lung	Mediastinum	Osteosarcoma	Metastatic (Uncertain Primary Site)
* Mammary Gland	Duct	Cyst	Mild
Mesentery		Metaplasia	Osseous, Moderate
		Osteosarcoma	Metastatic (Uncertain Primary Site)
Note: METAPL TGLs = 2			
Note: TGL 2 IS ON SLIDE 5B,(I).			
Note: [OSTEOSARC] TGLs = 2			
* Nose	Lumen	Fungus	Mild
	Lumen	Inflammation	Suppurative, Mild
* Pancreas	Acinar Cell	Atrophy	Marked
		Osteosarcoma	Metastatic (Uncertain Primary Site)
Note: [OSTEOSARC] TGLs = 5			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 668

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029717

ORGAN AND ACCOUNTABLE SITE STATUS

Note: TGL 5 IS ON SLIDE (III).

Note: ATROPHY TGLs = 5

* Preputial Gland

Atrophy

Moderate

Duct

Cyst

Marked

Skeletal Muscle

Abdominal

Metaplasia

Osseous, Mild

Abdominal

Osteosarcoma

Metastatic (Uncertain Primary Site)

Diaphragm

Osteosarcoma

Metastatic (Uncertain Primary Site)

Note: [OSTEOSARC] TGLs = 8

Note: TGL 8 IS ON SLIDE (V)

Note: TGL 3 IS ON SLIDE II.

Note: [OSTEOSARC] TGLs = 3

Note: METAPL TGLs = 3

* Spleen

Osteosarcoma

Metastatic (Uncertain Primary Site)

Note: [OSTEOSARC] TGLs = 4

Note: TGL 4 IS ON SLIDE III.

* Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA TGLs = 1-7

Atrophy

Mild

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

Animal Note: PRIMARY SITE FOR OSTEOSARCOMAS IS UNCERTAIN

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 26

TRT#: 1

SEX: Male

DAY ON TEST: 577

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028680

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* 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	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Brain		Hemorrhage	Marked
Note: HEMORRHAGE	TGLs = 7-1		
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hemorrhage	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: TGL 5 IS ON SLIDE (II).			
Note: HEMORRHAGE	TGLs = 5		
* Lung		Hemorrhage	Moderate
		Leukemia Mononuclear	
Note: HEMORRHAGE	TGLs = 6-4		
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Mild
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3		
Note: TGL 3-SPLEEN IS ON SLIDE 2B.			
Note: TGL 4 ON SLIDE I.			
Note: LEUKEMIA MONUC	TGLs = 4		
* Stomach	Forestomach	Mineralization	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 26

TRT#: 1

SEX: Male

DAY ON TEST: 577

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028680

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes

Glandular

Mineralization

Mild

Bilateral, Interstit Cell

Adenoma

Bilateral, Interstit Cell

Hyperplasia

Mild

Note: ADENOMA TGLs = 2-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 27

TRT#: 1

SEX: Male

DAY ON TEST: 596

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028857

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 3			
Note: TGL 3 IS FAT NECROSIS ON SLIDE I.			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Stomach	Forestomach	Squamous Cell Papilloma	
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
Note: ATROPHY TGLs = 1-7			
Note: ADENOMA TGLs = 2-7			
* Thyroid Gland	C Cell	Adenoma	
Note: ADENOMA TGLs = 4-3			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 28

TRT#: 1

SEX: Male

DAY ON TEST: 651

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029503

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Prostate

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Eye		Cataract	Moderate
Note: CATARACT TGLs = 1			
Note: TGL 1 IS ON SLIDE J.			
* Heart		Inflammation	Chronic, Mild
* Islets, Pancreatic		Carcinoma	
Note: CARCINOMA TGLs = 3			
Note: TGL 3 IS ON SLIDE (I).			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	Mild
	Bile Duct	Hyperplasia	Mild
Note: TGL 4 IS ON SLIDE (II).			
[Hyperplasia TGLS = 4]			
* Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 5-4			
* Nose	Lumen	Fungus	Moderate
	Lumen	Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Preputial Gland		Atrophy	Mild
	Duct	Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 28	TRT#: 1	SEX: Male	DAY ON TEST: 651
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83029503

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Atrophy	Marked
	Interstit Cell	Hyperplasia	Mild

Note: ATROPHY TGLs = 2-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 481

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A83027986

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mandibular
- * Pituitary Gland
- * Skin
- * Thyroid Gland

- * Adrenal Gland - Medulla
- * Epididymis
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Lymph Node - Mesenteric
- * Prostate
- * Stomach - Forestomach
- * Trachea

- * Bone
- * Esophagus
- * Intestine Small - Duodenum
- * Kidney
- * Nose
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lung
- * Parathyroid Gland
- * Seminal Vesicle
- * Thymus

MISSING

- * Mammary Gland

OBSERVATIONS

- * Heart Inflammation Chronic, Moderate
- * Liver Basophilic Focus Minimal
- Centrilobular Degeneration Moderate
- Bile Duct Hyperplasia Mild
- * Pancreas Acinar Cell Atrophy Mild
- * Preputial Gland Adenoma
- Atrophy Moderate
- Fibrosis Marked
- Inflammation Suppurative, Moderate
- Note: FIBROSIS TGLs = 1
- Note: ATROPHY TGLs = 2
- Note: ADENOMA TGLs = 2
- Note: TGL 2 IS ON SLIDE II.
- Note: TGL 1 IS ON SLIDE I.
- Note: INFLAMMATION TGLs = 2
- * Spleen Hematopoietic Cell Proliferation Marked
- * Testes Bilateral, Interstit Cell Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 30

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031518

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large - Cecum	* Intestine Large - Rectum	* Intestine Small - Duodenum
* 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	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	Tongue	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Medulla Cortex	Pheochromocytoma Benign Vacuolization Cytoplasmic Inflammation	Mild Chronic, Mild
* Heart			
* Intestine Large	Colon	Parasite Metazoan	Mild
* Intestine Small	Ileum	Hyperplasia	Lymphoid, Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Basophilic Focus Hyperplasia Leukemia Mononuclear Mixed Cell Focus	Minimal Mild Minimal
* Lung		Leukemia Mononuclear	
Mesentery Note: NECROSIS TGLs = 2-21	Fat	Necrosis	Focal, Moderate
* Pancreas	Acinar Cell Acinar Cell	Adenoma Atrophy	Multiple Mild
* Spleen Note: LEUKEMIA MONUC TGLs = 3-2		Leukemia Mononuclear	
* Testes Note: ADENOMA TGLs = 1-9	Bilateral, Interstit Cell	Adenoma	
Tongue Note: SLIDE 22-TONGUE NOT REMARKABLE.			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 663

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A83029640

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Kidney
* Pancreas
* Spleen
* Thyroid Gland

* Adrenal Gland - Medulla
* Epididymis
* Lymph Node - Mesenteric
* Salivary Glands
* Stomach - Forestomach
* Trachea

* Bone
* Esophagus
Mesentery
* Seminal Vesicle
* Stomach - Glandular
* Urinary Bladder

* Bone Marrow
* Islets, Pancreatic
* Nose
* Skin
* Thymus

MISSING

* Parathyroid Gland

* Preputial Gland

AUTO PRECLUDES DIAG.

* Intestine Large - Cecum
* Intestine Small - Ileum

* Intestine Large - Colon
* Intestine Small - Jejunum

* Intestine Large - Rectum

* Intestine Small - Duodenum

OBSERVATIONS

* Heart
* Liver
* Lung
* Lymph Node
* Mammary Gland
Note: CYST TGLs = 1-8
* Pituitary Gland
Note: [ADENOMA] TGLs = 3-1
* Prostate
* Testes
Note: ADENOMA TGLs = 2-7

Bile Duct
Mandibular
Duct
Pars Distalis
Interstit Cell

Inflammation
Hyperplasia
Congestion
Hyperplasia
Cyst
Adenoma
Inflammation
Adenoma
Atrophy

Chronic, Moderate
Mild
Moderate
Lymphoid, Moderate
Mild
Suppurative, Mild
Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 32

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031519

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Thymus

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Lymph Node			
Note: TGL 2 IS ON SLIDE (I)			
* Pancreas	Acinar Cell	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Atrophy	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
Note: ADENOMA TGLs = 1-9			
* Thyroid Gland	C Cell	Adenoma	
		Hyperplasia	Cystic, Moderate
Tongue		Inflammation	Focal, Mild
Note: INFLAMMATION TGLs = 3-21			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031520

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* 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	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland Note: ADENOMA TGLs = 3-22	Cortex	Adenoma	
Blood Vessel	Mesent Artery	Polyarteritis Inflammation	Moderate Chronic, Mild
* Heart	Colon	Parasite Metazoan	Mild
* Intestine Large		Nephropathy	Chronic, Minimal
* Kidney	Bile Duct	Hepatodiaphragmatic Nodule Hyperplasia Mixed Cell Focus	Moderate Mild Mild
* Liver Note: MIXED CL FOCUS TGLs = 4-23 Note: ANOM HEPAT LOB TGLs = 4-23			
Mesentery Note: NECROSIS TGLs = 2-21	Fat	Necrosis	Focal, Mild
* Pancreas		Polyarteritis	Moderate
* Pituitary Gland Note: CYST TGLs = 6-1	Pars Distalis	Cyst	Mild
* Preputial Gland	Duct	Cyst	Mild
* Testes Note: ADENOMA TGLs = 1-9	Bilateral, Interstit Cell	Adenoma	
* Thymus Note: THYMUS IS ON SLIDE 5.			
* Thyroid Gland	Follicular Cel	Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031520

ORGAN AND ACCOUNTABLE SITE STATUS

Note: CARCINOMA TGLs = 5-3

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 624

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029138

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart	Valve	Bacterium Inflammation	Marked Chronic, Moderate
	Valve	Thrombosis	Marked
* Kidney		Bacterium Inflammation	Moderate Suppurative, Marked
Note: BACTERIUM TGLs = 4-6			
Note: INFLAMMATION TGLs = 4-6			
* Liver	Bile Duct	Hyperplasia Vacuolization Cytoplasmic Congestion	Mild Moderate Moderate
* Lung			
Note: CONGESTION TGLs = 5-4			
* Pancreas	Acinar Cell	Atrophy	Mild
Pharynx	Palate	Hyperplasia	Squamous, Mild
Note: TGL 6 TISSUE NOS IS PHARYNX.			
Note: [HYPERPLASIA] TGLs = 6-12			
* Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1			
Note: TGL 1 IS ON SLIDE I.			
* Testes	Bilateral, Interstit Cell	Adenoma Necrosis	Marked
Note: ADENOMA TGLs = 2-7			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 624

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029138

ORGAN AND ACCOUNTABLE SITE STATUS

Note: NECROSIS TGLs = 3-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 35

TRT#: 1

SEX: Male

DAY ON TEST: 668

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029718

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Minimal
* Lymph Node	Mesenteric	Angiectasis	Marked
	Mesenteric	Cyst	Multiple, Moderate
Note: ANGIECTASIS TGLs = 4			
Note: CYST TGLs = 4			
Note: TGL 4 IS ON SLIDE III-MESENTERY IS ACTUALLY MESENTERIC L.N.			
* Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2			
Note: TGL 2 IS ON SLIDE II-SUBCUTIS IS ACTUALLY MAMMARY GLAND.			
* Preputial Gland		Adenoma	
		Inflammation	Suppurative, Moderate
Note: [ADENOMA] TGLs = 1			
Note: TGL 1 IS ON SLIDE I.			
Note: INFLAMMATION TGLs = 1			
* Testes	Interstitial Cell	Adenoma	
		Atrophy	Marked
Note: ADENOMA TGLs = 3-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 728

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031521

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Esophagus
* Intestine Large - Rectum
* Islets, Pancreatic
* Parathyroid Gland
* Seminal Vesicle
* Trachea

* Bone
* Eye
* Intestine Small - Duodenum
* Mammary Gland
* Preputial Gland
* Skin
* Urinary Bladder

* Brain
* Intestine Large - Cecum
* Intestine Small - Ileum
* Nose
* Prostate
* Stomach - Glandular

* Epididymis
* Intestine Large - Colon
* Intestine Small - Jejunum
* Pancreas
* Salivary Glands
* Thymus

OBSERVATIONS

* Adrenal Gland

* Bone Marrow
* Heart
* Kidney
* Liver

Medulla
Medulla

Bile Duct

Hyperplasia
Pheochromocytoma Benign
Leukemia Mononuclear
Inflammation
Nephropathy
Degeneration
Hyperplasia
Leukemia Mononuclear

Focal, Mild

Chronic, Mild
Chronic, Mild
Cystic, Mild
Mild

Note: LEUKEMIA MONUC TGLs = 5-5

* Lung

Note: LEUKEMIA MONUC TGLs = 6-4

* Lymph Node

Mandibular
Mediastinal
Mesenteric
Pancreatic

Leukemia Mononuclear

Leukemia Mononuclear
Leukemia Mononuclear
Leukemia Mononuclear
Leukemia Mononuclear

Note: PANCREAS MASS TGL 4 IS ON SLIDE 5 & IS PANCREATIC LYMPH NODE

[Leukemia Mononuclear TGLs = 4-5]

* Pituitary Gland

[Adenoma TGLs = 7-1]

Pars Distalis

Adenoma

* Spleen

Note: LEUKEMIA MONUC TGLs = 3-2-1

* Stomach

Artery, Forestomach

Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 36	TRT#: 1	SEX: Male	DAY ON TEST: 728
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031521

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral, Interstit Cell Interstit Cell	Adenoma Hyperplasia	Mild
Note: ADENOMA TGLs = 2-9			
* Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 497

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028085

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Epididymis
* 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 - Mesenteric
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Seminal Vesicle	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node - Mandibular	* Mammary Gland	* Thymus
---------------------------	-----------------	----------

INSUFFICIENT TISSUE

* Salivary Glands

OBSERVATIONS

* Adrenal Gland	Cortex	Hyperplasia	Focal, Moderate
* Brain	Hippocampus	Vacuolization Cytoplasmic	Moderate
* Heart		Inflammation	Chronic, Moderate
* Liver			
Note: TGL 5 IS ON SLIDE I.			
Mesentery	Fat	Mineralization	Focal, Mild
	Fat	Necrosis	Focal, Moderate
Note: MINERALIZATION TGLs = 3			
Note: TGL #3 IS ON SLIDE II			
Note: NECROSIS TGLs = 3			
Note: SECTION OF MESENTERIC FAT IS TGL 3.			
* Nose	Lumen	Fungus	
	Lumen	Inflammation	Suppurative, Moderate
* Skin	Subcut Tiss	Necrosis	Marked
Note: NECROSIS TGLs = 1			
Note: MASS MARKED NECROSIS TGL 1 IS ON SLIDE I.			
* Testes	Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 2-7			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 497

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028085

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 707

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A84031522

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	Ear	* 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	* Nose	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
Eye	Retina	Cataract	Moderate
		Degeneration	Moderate
Note: CATARACT TGLs = 9-14			
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
Note: NEPHROPATHY TGLs = 6-7			
* Liver	Bile Duct	Basophilic Focus	Mild
		Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-5			
* Lung		Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Mild
* Pancreas	Acinar Cell	Adenoma	
* Skin	Subcut Tiss	Fibroma	
	Subcut Tiss	Hemorrhage	Chronic, Mild
Note: TGL 1 IS ON SLIDE I.			
Note: HEMORRHAGE TGLs = 1			
Note: FIBROMA TGLs = 8			
Note: TGL 8 IS ON SLIDE III.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 38	TRT#: 1	SEX: Male	DAY ON TEST: 707
	DOSE: VEHICLE CONTROL	DISP: Dead	HISTO: A84031522

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-2-1		
Note: TGL 5 IS ON SLIDE II.			
Note: LEUKEMIA MONUC	TGLs = 5		
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
	Bilateral, Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 3-9		
Note: HYPERPLASIA	TGLs = 3-9		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 39

TRT#: 1

SEX: Male

DAY ON TEST: 480

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A83027987

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|---------------------------|------------------------------|-----------------------|
| * Bone | * Bone Marrow | * Epididymis | * Esophagus |
| * Intestine Large - Cecum | * Intestine Large - Colon | * Intestine Small - Duodenum | * Islets, Pancreatic |
| * Lymph Node - Mandibular | * Lymph Node - Mesenteric | * Nose | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Stomach - Forestomach | * Stomach - Glandular |
| * Thyroid Gland | * Trachea | * Urinary Bladder | |

MISSING

- | | | |
|----------------------------|-----------------|----------|
| * Intestine Large - Rectum | * Mammary Gland | * Thymus |
|----------------------------|-----------------|----------|

AUTO PRECLUDES DIAG.

- | | |
|---------------------------|-----------------------------|
| * Intestine Small - Ileum | * Intestine Small - Jejunum |
|---------------------------|-----------------------------|

OBSERVATIONS

- | | | | |
|--|-------------------|--|-------------------------------|
| * Adrenal Gland | Cortex
Medulla | Leukemia Mononuclear
Leukemia Mononuclear
Hemorrhage | Moderate |
| * Brain | | | |
| Note: HEMORRHAGE | TGLs = 4 | | |
| Note: TGL 4 IS ON SLIDE I. | | | |
| Note: MASS OF RBC'S AND WBC'S IS ASSOCIATED WITH THE LEUKEMIA. | | | |
| * Heart | | Inflammation | Chronic, Moderate |
| * Kidney | | Leukemia Mononuclear | |
| * Liver | Bile Duct | Hyperplasia
Leukemia Mononuclear | Mild |
| Note: LEUKEMIA MONUC | TGLs = 2-5 | | |
| * Lung | | Leukemia Mononuclear | |
| Note: LEUKEMIA MONUC | TGLs = 3-4 | | |
| * Lymph Node | Mediastinal | Leukemia Mononuclear | |
| * Preputial Gland | | Atrophy
Inflammation | Moderate
Chronic, Moderate |
| * Spleen | | Leukemia Mononuclear | |
| Note: TGL 1 IS ON SLIDE 2B. | | | |
| Note: LEUKEMIA MONUC | TGLs = 1 | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 39	TRT#: 1	SEX: Male	DAY ON TEST: 480
	DOSE: VEHICLE CONTROL	DISP: Dead	HISTO: A83027987

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 713

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031523

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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 - Mandibular	* Lymph Node - Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

Blood		Leukocytosis	Moderate
[Leukocytosis TGLS = 1-61]			
* Bone Marrow	Myeloid Cell	Hyperplasia	Moderate
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Moderate
		Hematopoietic Cell Proliferation	Mild
	Bile Duct	Hyperplasia	Minimal
* Pancreas	Acinar Cell	Adenoma	
* Preputial Gland		Adenoma	
		Inflammation	Suppurative, Marked
Note: ABSCESS TGLs = 3			
Note: [ADENOMA] TGLs = 3			
Note: TGL 3 ON SLIDE I-IS PREPUTIAL GLAND			
* Skin		Ulcer	Marked
Note: ULCER TGLs = 2			
Note: TGL 2 ON SLIDE I-IS SKIN			
* Spleen		Hematopoietic Cell Proliferation	Moderate
		Hyperplasia	Lymphoid, Moderate
[Hematopoietic Cell Proliferation TGLS = 6-6]			
[Hyperplasia TGLS = 6-2]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 40	TRT#: 1	SEX: Male	DAY ON TEST: 713
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A84031523

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Bilateral, Interstit Cell	Adenoma	
	Bilateral, Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 4-9		
Note: HYPERPLASIA	TGLs = 4-9		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031524

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Rectum
* Islets, Pancreatic
* Mammary Gland
* Pituitary Gland
* Seminal Vesicle
* Trachea

* Adrenal Gland - Medulla
* Epididymis
* Intestine Small - Duodenum
* Lung
* Nose
* Preputial Gland
* Stomach - Forestomach
* Urinary Bladder

* Bone
* Esophagus
* Intestine Small - Ileum
* Lymph Node - Mandibular
* Pancreas
* Prostate
* Stomach - Glandular

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Jejunum
* Lymph Node - Mesenteric
* Parathyroid Gland
* Salivary Glands
* Thymus

OBSERVATIONS

* Heart
* Intestine Large
* Kidney
* Liver

Colon

Inflammation
Parasite Metazoan
Nephropathy
Basophilic Focus
Eosinophilic Focus
Hyperplasia
Leukemia Mononuclear

Chronic, Mild
Mild
Chronic, Mild
Multiple, Mild
Moderate
Mild

Bile Duct

[Eosinophilic Focus TGLS = 4-5]

* Lung

Note: RECUT FOR MASS DESCRIBED WAS NOT FOUND.

Fat

Necrosis

Focal, Moderate

Mesentery

Note: NECROSIS TGLs = 3-22

Epidermis

Hyperplasia

Focal, Moderate

* Skin

Note: [HYPERPLASIA] TGLs = 1-21

Bilateral, Interstit Cell

Leukemia Mononuclear

* Spleen

* Testes

Note: ADENOMA TGLs = 2-9

Adenoma

Atrophy

Marked

* Thyroid Gland

Note: ADENOMA TGLs = 5-3

Bilateral, C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031525

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Epididymis
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Mammary Gland
- * Preputial Gland
- * Spleen
- * Thyroid Gland

- * Bone
- * Esophagus
- * Intestine Small - Duodenum
- * Lung
- * Nose
- * Prostate
- * Stomach - Forestomach
- * Trachea

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Pancreas
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Parathyroid Gland
- * Seminal Vesicle
- * Thymus

OBSERVATIONS

- * Adrenal Gland
- * Heart
- * Kidney
- * Liver
- * Pituitary Gland
- * Skin
- * Testes

Bilateral, Medulla

Pars Distalis

Subcut Tiss

Pheochromocytoma Benign

Inflammation

Nephropathy

Basophilic Focus

Hyperplasia

Fibrosarcoma

Chronic, Mild

Chronic, Moderate

Multiple, Minimal

Focal, Mild

Note: TGL 4 IS TAIL.

Note: FIBROSARC TGLs = 4-22

Note: FIBROSARC TGLs = 1-21

Note: TGL 1 IS SCROTUM.

Note: ADENOMA TGLs = 2-3

Note: ATROPHY TGLs = 2-9

Adenoma

Atrophy

Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 641

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029450

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland Note: TGL 3 CLITORAL GLAND IS ON SLIDE 15.			
* Heart		Inflammation	Chronic, Mild
* Islets, Pancreatic Note: TISSUE IS PANCREATIC ISLETS INSTEAD OF MESENTERY. Note: CARCINOMA TGLs = 1 Note: TGL 1 IS ON SLIDE I.		Carcinoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
* Lung [Alveolar/Bronchiolar Adenoma TGLS = 2-4-1]		Alveolar/Bronchiolar Adenoma	
* Mammary Gland Note: TGL 2 ON SLIDE 22 IS MAMMARY GLAND NOT CLITORAL GLAND.			
* Prostate		Inflammation	Suppurative, Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 469

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A83027924

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|------------------------------|-------------------------|-----------------------|
| * Bone | * Bone Marrow | * Epididymis | * Esophagus |
| * Intestine Large - Cecum | * Intestine Small - Duodenum | * Islets, Pancreatic | * Kidney |
| * Lymph Node - Mandibular | * Lymph Node - Mesenteric | * Nose | * Pancreas |
| * Parathyroid Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Stomach - Forestomach | * Stomach - Glandular |
| * Testes | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- | | |
|-------------------|----------|
| * Pituitary Gland | * Thymus |
|-------------------|----------|

AUTO PRECLUDES DIAG.

- | | | | |
|---------------------------|-----------------------------|---------------------------|----------------------------|
| * Adrenal Gland - Cortex | * Adrenal Gland - Medulla | * Intestine Large - Colon | * Intestine Large - Rectum |
| * Intestine Small - Ileum | * Intestine Small - Jejunum | | |

INSUFFICIENT TISSUE

- * Mammary Gland

OBSERVATIONS

- | | | |
|--|----------------------|-------------------|
| * Brain
Note: HEMORRHAGE TGLs = 2-1 | Hemorrhage | Marked |
| * Heart | Inflammation | Chronic, Moderate |
| * Liver | Leukemia Mononuclear | |
| * Lung | Leukemia Mononuclear | |
| * Spleen
Note: LEUKEMIA MONUC TGLs = 1
Note: TGL 1 IS ON SLIDE 2B. | Leukemia Mononuclear | |

PRIMARY CAUSE OF DEATH

-

Animal Note: POOR SLIDES DUE TO TECHNICAL PROBLEM AND AUTOLYSIS.

Animal Note: HAD TO REPROCESS TISSUES.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031526

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Islets, Pancreatic	* Lung
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Mild
* Intestine Small	Ileum	Hyperplasia	Lymphoid, Moderate
	Jejunum	Hyperplasia	Lymphoid, Mild
Note: HYPERPLASIA TGLs = 2-21			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Prostate		Inflammation	Suppurative, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-9			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031527

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland Clitoral Gl Note: TGL 3 IS ON SLIDE (I). Note: TGL 2 IS ON SLIDE (I).	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Mild
* Islets, Pancreatic Note: ADENOMA TGLs = 3-5		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Basophilic Focus Hyperplasia	Minimal Mild
* Mammary Gl Note: TGL 4 IS ON SLIDE II- TISSUE IS MAMMARY GLAND NOT SKIN.			
* Pancreas Note: ATROPHY TGLs = 3-5	Acinar Cell	Atrophy	Mild
* Pituitary Gland [Adenoma TGLS = 4-1]	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Mild
* Skin Note: FIBROMA TGLs = 1-21	Subcut Tiss	Fibroma	
* Testes Note: ADENOMA TGLs = 2-9	Bilateral, Interstit Cell	Adenoma Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 46	TRT#: 1	SEX: Male	DAY ON TEST: 730
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031527

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland	Follicle	Cyst	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031528

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* 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	* Mammary Gland	* Pituitary Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Mild
* Pancreas	Acinar Cell	Adenoma	
	Acinar Cell	Atrophy	Mild
		Polyarteritis	Marked
Note: ADENOMA	TGLs = 2-5		
* Prostate		Inflammation	Suppurative, Mild
* Stomach	Forestomach	Polyarteritis	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 1-9		
* Thyroid Gland	Follicle	Cyst	Mild
	Follicular Cel	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031528

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 48

TRT#: 1

SEX: Male

DAY ON TEST: 664

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029641

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla
* Epididymis
* Intestine Large - Rectum
* Islets, Pancreatic
* Nose
* Salivary Glands
* Stomach - Glandular
* Urinary Bladder

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lung
* Pancreas
* Seminal Vesicle
* Thymus

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mandibular
* Parathyroid Gland
* Skin
Tissue NOS

* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Lymph Node - Mesenteric
* Preputial Gland
* Spleen
* Trachea

OBSERVATIONS

* Adrenal Gland
* Heart
* Kidney

* Liver
* Mammary Gland
* Pituitary Gland
 [Adenoma TGLS = 4-1]
* Prostate
* Stomach

* Testes

 Note: ADENOMA TGLs = 1-9
* Thyroid Gland
 Note: TGL 3- THYROID C-CELL CARCINOMA IS ON SLIDE 3 AND SLIDE I.
 Note: CARCINOMA TGLs = 3-3

Cortex

Renal Tubule

Bile Duct

Pars Distalis

Forestomach
Forestomach
Bilateral, Interstit Cell
Bilateral, Interstit Cell

Vacuolization Cytoplasmic
Inflammation
Mineralization
Nephropathy
Hyperplasia
Hyperplasia
Adenoma

Inflammation
Inflammation
Ulcer
Adenoma
Hyperplasia

Carcinoma

Moderate
Chronic, Mild
Mild
Chronic, Moderate
Mild
Lobular, Mild

Suppurative, Moderate
Chronic, Moderate
Marked

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 49

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031529

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Minimal
	Bile Duct	Hyperplasia	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland	Duct	Cyst	Mild
		Inflammation	Suppurative, Mild
* Prostate		Inflammation	Suppurative, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 1-9		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 50

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031530

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum
* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum	* 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

* Adrenal Gland	Cortex Medulla	Hyperplasia Pheochromocytoma Benign	Focal, Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia Mixed Cell Focus	Minimal Multiple, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC	TGLs = 1-21		
* Testes	Bilateral, Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 51

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031574

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland Note: PHEOCHROM BGN TGLs = 4-8	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart Note: FIBROSIS TGLs = 7-2	Atrium	Fibrosis Inflammation	Marked Chronic, Moderate
* Kidney Note: NEPHROPATHY TGLs = 5-7		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Basophilic Focus Hyperplasia Vacuolization Cytoplasmic Congestion	Multiple, Mild Mild Minimal Mild
* Lung Note: CONGESTION TGLs = 8-4			
Mesentery Note: NECROSIS TGLs = 3-21	Fat	Necrosis	Focal, Marked
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen Note: ATROPHY TGLs = 6-2		Atrophy	Moderate
* Stomach Note: STOMACH MASS WAS APPARENTLY A MUCOSAL FOLD.			
* Testes	Bilateral, Interstit Cell	Adenoma Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 51	TRT#: 5	SEX: Male	DAY ON TEST: 729
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A84031574

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ATROPHY TGLs = 1-9 Note: HYPERPLASIA TGLs = 2-9 Note: ADENOMA TGLs = 2-9 * Thymus Note: THYMUS IS PRESENT ON SLIDE 2.	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 52

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031575

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* 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
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	Minimal
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Prostate		Inflammation	Suppurative, Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild

Note: ADENOMA TGLs = 1-9
 Note: HYPERPLASIA TGLs = 1-9

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 53

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031576

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

- | | | | |
|---|---------------------------|------------------------------|-------------------|
| * Adrenal Gland | Medulla | Hyperplasia | Focal, Mild |
| * Heart | | Inflammation | Chronic, Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | Bile Duct | Eosinophilic Focus | Multiple, Mild |
| | | Hyperplasia | Mild |
| | | Vacuolization Cytoplasmic | Mild |
| * Lung | | Alveolar/Bronchiolar Adenoma | |
| | | Congestion | Minimal |
| | Alveolar Epith | Hyperplasia | Mild |
| Note: HYPERPLASIA | TGLs = 3-4 | | |
| Note: ALV BRON ADEN | TGLs = 3-4 | | |
| [Alveolar/Bronchiolar Adenoma TGLS = 2-4] | | | |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Prostate | | Inflammation | Suppurative, Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | | Atrophy | Moderate |
| | Interstit Cell | Hyperplasia | Mild |
| Note: ADENOMA | TGLs = 1-9 | | |
| * Thyroid Gland | Follicle | Cyst | Marked |
| Note: CYST | TGLs = 4-3 | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 54

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031577

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* 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	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Focal, Moderate
Note: [NECROSIS] TGLs = 2-21			
* Pancreas	Acinar Cell	Adenoma	
	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Atrophy	Moderate
* Prostate		Fibrosis	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-9			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 55

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031578

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|----------------------------|------------------------------|---------------------------|
| * Adrenal Gland - Cortex | * 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 | * Parathyroid Gland | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach - Forestomach |
| * Stomach - Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|---|---------------------------|----------------------------|-------------------|
| * Adrenal Gland | Medulla | Mineralization | Marked |
| | Medulla | Pheochromocytoma Malignant | |
| | Medulla | Thrombosis | Marked |
| Note: PHEOCHROM MAL TGLs = 2-21 | | | |
| Note: MINERALIZATION TGLs = 2-21 | | | |
| Note: THROMBUS TGLs = 2-21 | | | |
| * Kidney | | Nephropathy | Chronic, Moderate |
| * Liver | | Basophilic Focus | Multiple, Mild |
| | | Clear Cell Focus | Multiple, Minimal |
| | | Degeneration | Cystic, Minimal |
| | Bile Duct | Hyperplasia | Mild |
| * Mammary Gland | Duct | Cyst | Mild |
| Mesentery | | Polyarteritis | Moderate |
| Note: MESENTERY POLYARTERITIS ON SLIDE 8. | | | |
| * Pancreas | | Polyarteritis | Marked |
| Note: POLYARTERITIS TGLs = 3-5 | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 4-1] | | | |
| * Preputial Gland | | Atrophy | Mild |
| * Prostate | | Inflammation | Suppurative, Mild |
| * Testes | Bilateral, Interstit Cell | Adenoma | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 55

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031578

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA TGLs = 1-9

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 56

TRT#: 5

SEX: Male

DAY ON TEST: 727

DOSE: 225 MG/KG

DISP: Dead

HISTO: A84031579

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Seminal Vesicle	* Stomach - Forestomach	* Stomach - Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Mesothelioma Malignant	
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Degeneration	Cystic, Mild
		Hyperplasia	Mild
		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-21,5-5,5-21]		
* Lung		Leukemia Mononuclear	
	Note: FOREIGN BODY (OIL) IN LYMPHATICS; NO INFLAMMATION.		
	Note: LEUKEMIA MONUC TGLs = 6-4		
* Lymph Node	Mandibular	Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Mild
Mesentery		Mesothelioma Malignant	
	Note: MESOTHELIOMA IN MESENTERY IS ADJACENT TO STOMACH ON SLIDE 6		
* Pancreas		Polyarteritis	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 7-1]		
* Skin		Cyst Epithelial Inclusion	Moderate
	Note: [CYST EPITH INC] TGLs = 8-22		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 56	TRT#: 5	SEX: Male	DAY ON TEST: 727
	DOSE: 225 MG/KG	DISP: Dead	HISTO: A84031579

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 3-2]		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Marked
	Tunic	Mesothelioma Malignant	
Note: ADENOMA	TGLs = 2-9		
Note: ATROPHY	TGLs = 1-9		
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 57

TRT#: 5

DOSE: 225 MG/KG

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO: A84031580

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Intestine Small	Ileum	Hyperplasia	Lymphoid, Mild
* Islets, Pancreatic		Adenoma	Multiple
Note: ADENOMA	TGLs = 4-22		
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Lung	Lymphatic	Foreign Body	Mild
Note: REFRACTILE MATERIAL (OIL) IN LYMPHATICS-NO INFLAMMATION.			
* Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA ON SLIDE 10.			
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS	TGLs = 3-21		
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Preputial Gland	Duct	Cyst	Moderate
		Hyperplasia	Mild
* Testes	Interstitial Cell	Adenoma	
		Atrophy	Marked
Note: ATROPHY	TGLs = 1-9		
Note: ADENOMA	TGLs = 2-9		
* Thymus		Thymoma Benign	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 58

TRT#: 5

SEX: Male

DAY ON TEST: 703

DOSE: 225 MG/KG

DISP: Dosing Accident

HISTO: A84031581

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	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	Thymus
Thyroid Gland	Tissue NOS	Trachea	Urinary Bladder

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Inflammation	Chronic, Mild
Kidney		Nephropathy	Chronic, Mild
Liver		Basophilic Focus	Multiple, Minimal
	Bile Duct	Hyperplasia	Minimal
Lung	Alveolus	Foreign Body	Moderate
		Hemorrhage	Moderate
Note: FOREIGN BODY TGLs = 4-4,4-4-1			
Mesentery	Fat	Necrosis	Focal, Moderate
Note: SPERMATIC CORD FAT IS CODED AS MESENTERY FAT.			
Note: TGL 1 IS ON SLIDE (I).			
Note: NECROSIS TGLs = 1			
Prostate		Inflammation	Suppurative, Moderate
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 3-9			

PRIMARY CAUSE OF DEATH -

Animal Note: DOSING ACCIDENT OIL IN LUNGS.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 59

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031582

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Cortex Bilateral, Medulla	Hyperplasia Pheochromocytoma Benign	Focal, Mild
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus Inflammation Mixed Cell Focus Polyarteritis	Multiple, Mild Granulomatous, Multiple, Mild Mild Marked
* Pancreas Note: POLYARTERITIS TGLs = 3-5			
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland Note: [ADENOMA] TGLs = 1-21		Adenoma	
* Stomach	Forestomach	Polyarteritis	Marked
* Testes Note: ADENOMA TGLs = 2-9	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 60

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031583

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

- | | | | |
|--------------------------------------|---------------------------|-----------------------------------|-----------------------|
| * Adrenal Gland | Cortex | Accessory Adrenal Cortical Nodule | Mild |
| | Cortex | Hyperplasia | Focal, Mild |
| * Heart | | Inflammation | Chronic, Moderate |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Mild |
| | Bile Duct | Hyperplasia | Mild |
| * Nose | Lumen | Fungus | Mild |
| | Lumen | Inflammation | Suppurative, Mild |
| | Nasolacrim Dct | Inflammation | Suppurative, Moderate |
| * Preputial Gland | Duct | Cyst | Mild |
| * Prostate | | Inflammation | Chronic, Moderate |
| * Skin | | Keratoacanthoma | |
| Note: [KERATOACANTHMA] TGLs = 1-21 | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| Note: ADENOMA TGLs = 2-9 | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 61

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031584

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Cortex	Adenoma	
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Mild
* Lymph Node	Mandibular	Cyst	Mild
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 4-1]		
* Prostate		Inflammation	Suppurative, Moderate
* Skin	Subcut Tiss	Fibroma	
		Keratoacanthoma	Multiple
	Note: FIBROMA TGLs = 3-23		
	Note: KERATOACANTHMA TGLs = 1-21,2-22		
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	Bilateral, Interstit Cell	Hyperplasia	Mild
	Note: ADENOMA TGLs = 5-9		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 62

TRT#: 5

SEX: Male

DAY ON TEST: 365

DOSE: 225 MG/KG

DISP: Dosing Accident

HISTO: A83027680

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Lymph Node - Mandibular	Mammary Gland
Nose	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

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Inflammation	Chronic, Mild
Liver		Vacuolization Cytoplasmic	Mild
Note: TGL 4 IS ON SLIDE (I).			
Lung	Alveolus	Foreign Body	Mild
Note: FOREIGN BODY PALE AND REFRACTILE.			
Note: FOREIGN BODY TGLs = 2-4			
Lymph Node	Mesenteric	Hyperplasia	Lymphoid, Moderate
Testes	Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 63

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031585

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* 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	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Multiple, Minimal
	Bile Duct	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 2-21			
* Pancreas	Acinar Cell	Adenoma	
	Acinar Cell	Atrophy	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 64

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031586

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	Ear	* 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	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

Ear			
Note: EXTERNAL AND MIDDLE EAR NOT REMARKABLE ON SLIDE 43.			
Eye		Cataract	Moderate
	Retina	Degeneration	Moderate
Note: CATARACT	TGLs = 1-44		
* Heart		Fibrosis	Focal, Moderate
		Inflammation	Chronic, Moderate
Note: FIBROSIS	TGLs = 4-2		
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
Note: HYPERPLASIA	TGLs = 3-5		
Note: LEUKEMIA MONUC	TGLs = 3-5		
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-4		
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 2-9		
* Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 64

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031586

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 65

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031587

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Lymph Node - Mesenteric
* Preputial Gland
* Skin
* Thymus

* Adrenal Gland - Medulla
* Epididymis
* Intestine Large - Rectum
* Islets, Pancreatic
* Mammary Gland
* Prostate
* Spleen
* Trachea

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lung
* Pancreas
* Salivary Glands
* Stomach - Forestomach
* Urinary Bladder

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mandibular
* Pituitary Gland
* Seminal Vesicle
* Stomach - Glandular

MISSING

* Parathyroid Gland

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Nose	Lumen	Fungus	Moderate
	Lumen	Inflammation	Suppurative, Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 1-9		
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 66

TRT#: 5

SEX: Male

DAY ON TEST: 661

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029638

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Mammary Gland

OBSERVATIONS

* Adrenal Gland	Medulla Cortex	Hyperplasia Vacuolization Cytoplasmic Leukemia Mononuclear	Focal, Multiple, Mild Mild
* Bone Marrow		Inflammation	Chronic, Mild
* Heart		Nephropathy	Chronic, Mild
* Kidney	Renal Tubule	Pigmentation	Moderate
* Liver	Bile Duct	Degeneration Hyperplasia Hyperplasia Leukemia Mononuclear	Cystic, Moderate Moderate Nodular, Moderate
Note: LEUKEMIA MONUC	TGLs = 4-5		
* Lung		Hemorrhage Leukemia Mononuclear	Moderate
Note: LEUKEMIA MONUC	TGLs = 5-4		
Note: HEMORRHAGE	TGLs = 5-4		
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLS = 6-1]			
* Prostate		Inflammation	Suppurative, Mild
* Skin			
Note: YELLOW COLOR NOT OBSERVED ON SKIN SECTION.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 66	TRT#: 5	SEX: Male	DAY ON TEST: 661
	DOSE: 225 MG/KG	DISP: Moribund	HISTO: A83029638

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen Note: TGL 3 ON SLIDE 2B. Note: LEUKEMIA MONUC TGLs = 3		Leukemia Mononuclear	
* Testes Note: HYPERPLASIA TGLs = 2-7 Note: ADENOMA TGLs = 2-7	Bilateral, Interstit Cell Interstit Cell	Adenoma Hyperplasia	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 67

TRT#: 5

SEX: Male

DAY ON TEST: 414

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83027681

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Vacuolization Cytoplasmic	Marked
* Mammary Gland	Duct	Cyst	Marked
* Nose	Lumen	Fungus	Moderate
	Lumen	Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
Note: ANGIECTASIS TGLs = 1-1 [Adenoma TGLS = 1-1]			
* Prostate		Inflammation	Suppurative, Mild
* Stomach	Forestomach	Edema	Marked
	Forestomach	Ulcer	Moderate

Note: RECUT NEEDED BUT ORGAN CUT THROUGH NO TISSUE LEFT.

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 68 **TRT#:** 5 **SEX:** Male **DAY ON TEST:** 609
DOSE: 225 MG/KG **DISP:** Moribund **HISTO:** A83028911

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Lung	* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach - Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Moderate
* Islets, Pancreatic		Adenoma	
Note: ADENOMA TGLs = 3			
Note: TGL 3 IS ON SLIDE (III).			
* Kidney		Nephropathy	Chronic, Marked
Note: NEPHROPATHY TGLs = 4-6			
* Liver		Basophilic Focus	Marked
		Vacuolization Cytoplasmic	Marked
Note: VACUOLIZ CYTO TGLs = 6-5			
* Mammary Gland	Duct	Cyst	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 7-1]			
* Prostate		Inflammation	Suppurative, Moderate
* Skin	Epidermis	Hyperplasia	Focal, Moderate
Note: TGL 1 IS ON SLIDE (I).			
Note: [HYPERPLASIA] TGLs = 1			
* Stomach	Epithelium, Forestomach	Hyperplasia	Marked
	Forestomach	Inflammation	Chronic, Marked
Note: INFLAMMATION TGLs = 5			
Note: [HYPERPLASIA] TGLs = 5			
Note: TGL 5 IS ON SLIDE 5B.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 68

TRT#: 5

SEX: Male

DAY ON TEST: 609

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83028911

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes

Interstitial Cell

Atrophy

Moderate

Hyperplasia

Mild

Note: ATROPHY TGLs = 2-7

* Thyroid Gland

Ultimobranchial Cyst

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 69

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031588

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Eosinophilic Focus	Mild
	Bile Duct	Hyperplasia	Mild
* Preputial Gland		Atrophy	Moderate
* Skin		Cyst Epithelial Inclusion	Moderate
Note: [CYST EPITH INC] TGLs = 1-21			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 2-9			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 70

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031589

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Epididymis	* 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	* Nose	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Trachea	* Urinary Bladder	

MISSING

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla
--------------------------	---------------------------

OBSERVATIONS

* Brain		Compression	Moderate
* Heart		Inflammation	Chronic, Moderate
* Intestine Large	Colon	Parasite Metazoan	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
* Mammary Gland	Duct	Cyst	Mild
		Hyperplasia	Lobular, Moderate
Note: HYPERPLASIA TGLs = 1-21 Note: CYST TGLs = 1-10			
* Pancreas	Acinar Cell	Adenoma	
	Acinar Cell	Atrophy	Mild
	Acinar Cell	Hyperplasia	Moderate
Note: ADENOMA TGLs = 4-22			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Preputial Gland		Atrophy	Moderate
* Prostate		Inflammation	Suppurative, Mild
* Skin	Subcut Tiss	Inflammation	Granulomatous, Moderate
Note: INFLAMMATION TGLs = 2-21-1 Note: TGL 2 IS ON SLIDE 21-1 Note: SLIDE 21 IS MAMMARY GLAND;21-1 IS SUBCUTANEOUS TISSUE.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 70	TRT#: 5	SEX: Male	DAY ON TEST: 729
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A84031589

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen Note: TGL 2 IS ON SLIDE 2B.			
* Testes Note: ADENOMA TGLs = 3-9	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 71

TRT#: 5

SEX: Male

DAY ON TEST: 695

DOSE: 225 MG/KG

DISP: Dead

HISTO: A84031590

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node - Mesenteric	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thyroid Gland	Tissue NOS	* Trachea	* Urinary Bladder

MISSING

* Thymus

OBSERVATIONS

* Brain		Hemorrhage	Moderate
* Heart	Atrium	Congestion	Moderate
Note: CONGESTION	TGLs = 6-2-1		
* Liver	Bile Duct	Basophilic Focus	Multiple, Mild
		Hyperplasia	Mild
		Leukemia Mononuclear	
		Congestion	Mild
* Lung			
Note: CONGESTION	TGLs = 4-4		
* Lymph Node	Mandibular	Hyperplasia	Lymphoid, Mild
* Mammary Gland		Fibroadenoma	
Note: TGL 1 IS ON SLIDE (I)			
Note: SLIDE I- SUBCUTIS IS MAMMARY GLAND.			
Note: FIBROADENOMA	TGLs = 1		
Mesentery	Fat	Inflammation	Granulomatous, Focal, Moderate
Note: TGL 2 IS ON SLIDE (II)			
Note: INFLAMMATION	TGLs = 2		
Note: TGL 2 SPERMATIC CORD WAS CODED AS MESENTERY.			
* Pancreas	Acinar Cell	Adenoma	
	Acinar Cell	Hyperplasia	Mild
Note: TGL 3 IS ON SLIDE (III)			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:42
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 71	TRT#: 5	SEX: Male	DAY ON TEST: 695
	DOSE: 225 MG/KG	DISP: Dead	HISTO: A84031590

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA	TGLs = 3			
* Pituitary Gland		Pars Distalis	Adenoma	
		Pars Distalis	Hemorrhage	Marked
	[Adenoma TGLS = 5-1]			
	[Hemorrhage TGLS = 5-1]			
* Spleen			Leukemia Mononuclear	
* Testes			Atrophy	Moderate
			Mineralization	Mild
* Thymus				
Note: THYMUS NOT FOUND ON RECUT.				

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:42

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 72

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031591

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart	Atrium	Inflammation	Chronic, Moderate
		Thrombosis	Marked
	[Inflammation TGLS = 5-2-1]		
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Mammary Gland	Duct	Cyst	Moderate
* Pancreas	Acinar Cell	Atrophy	Mild
* Preputial Gland		Adenoma	
		Atrophy	Moderate
* Prostate		Inflammation	Chronic, Mild
* Skin	Subcut Tiss	Lipoma	
	Note: LIPOMA TGLs = 1-21		
* Stomach	Forestomach	Squamous Cell Papilloma	
	Note: PAPHILLOMA SQUA TGLs = 4-6		
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
	Note: ADENOMA TGLs = 2-9		
* Thymus		Hyperplasia	Lymphoid, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 73

TRT#: 5

DOSE: 225 MG/KG

SEX: Male

DISP: Dead

DAY ON TEST: 726

HISTO: A84031592

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|------------------------------|---------------------------|-----------------------------|----------------------------|
| * Adrenal Gland - Medulla | * 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 | * Pituitary Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Skin |
| * Stomach - Forestomach | * Stomach - Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|--|------------------------------------|---------------------------|---------------|
| * Adrenal Gland | Cortex | Vacuolization Cytoplasmic | Mild |
| * Epididymis | | Mesothelioma Malignant | |
| * Heart | Atrium | Inflammation | Chronic, Mild |
| | | Thrombosis | Marked |
| Note: INFLAMMATION TGLs = 8-2
[Inflammation TGLS = 8-2-1] | | | |
| * Kidney | Renal Tubule | Nephropathy | Chronic, Mild |
| | Centrilobular | Pigmentation | Moderate |
| * Liver | Bile Duct | Degeneration | Marked |
| | | Hyperplasia | Mild |
| Note: DEGEN TGLs = 6-5 | | | |
| Mesentery | | Mesothelioma Malignant | |
| Note: [MESOTHELIO MAL] TGLs = 4-5, 5-21 | | | |
| * Pancreas | | | |
| Note: TGL4 IS ACTUALLY MESENTERY. | | | |
| * Seminal Vesicle | | Mesothelioma Malignant | |
| Note: MESOTHELIO MAL TGLs = 3-9 | | | |
| * Spleen | | Mesothelioma Malignant | |
| * Testes | Bilateral, Interstit Cell
Tunic | Adenoma | |
| | | Mesothelioma Malignant | |
| Note: ADENOMA TGLs = 1-9,1-9-1 | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 73

TRT#: 5

SEX: Male

DAY ON TEST: 726

DOSE: 225 MG/KG

DISP: Dead

HISTO: A84031592

ORGAN AND ACCOUNTABLE SITE STATUS

Note: MESOTHELIO MAL TGLs = 2-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 74

TRT#: 5

SEX: Male

DAY ON TEST: 577

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83028667

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Epididymis
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Nose
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Small - Duodenum
- * Lymph Node - Mandibular
- * Pancreas
- * Seminal Vesicle
- * Thymus

- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mesenteric
- * Pituitary Gland
- * Skin
- * Thyroid Gland

- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Mammary Gland
- * Prostate
- * Stomach - Forestomach
- * Trachea

MISSING

- * Parathyroid Gland

OBSERVATIONS

- * Bone Marrow
- * Heart
- * Kidney
- * Liver

Renal Tubule
Bile Duct

Leukemia Mononuclear
Inflammation
Pigmentation
Hyperplasia
Hyperplasia
Leukemia Mononuclear

Chronic, Mild
Moderate
Marked
Nodular, Moderate

Note: HYPERPLASIA TGLs = 4-5
Note: LEUKEMIA MONUC TGLs = 4-5

- * Lung
- * Preputial Gland
- * Spleen

Duct

Leukemia Mononuclear
Cyst
Leukemia Mononuclear

Moderate

Note: TGL 3-SPLEEN IS ON SLIDE 2B.
[Leukemia Mononuclear TGLS = 3-2]

- * Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA TGLs = 1-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 75

TRT#: 5

SEX: Male

DAY ON TEST: 729

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031593

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Colon
* Islets, Pancreatic
* Parathyroid Gland
* Seminal Vesicle
* Thyroid Gland

* Adrenal Gland - Medulla
* Epididymis
* Intestine Large - Rectum
* Lung
* Pituitary Gland
* Spleen
* Trachea

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lymph Node - Mesenteric
* Prostate
* Stomach - Forestomach
* Urinary Bladder

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Jejunum
* Mammary Gland
* Salivary Glands
* Thymus

OBSERVATIONS

* Heart
* Intestine Small
* Kidney
* Liver

Ileum

Inflammation
Hyperplasia
Nephropathy
Basophilic Focus
Hepatodiaphragmatic Nodule
Inflammation

Chronic, Mild
Lymphoid, Mild
Chronic, Mild
Multiple, Mild
Moderate
Granulomatous, Multiple, Minimal

Note: ANOM HEPAT LOB TGLs = 3-22

* Lymph Node

Mandibular

Hyperplasia

Lymphoid, Moderate

Note: PANCREATIC LYMPH NODE IS ENLARGED ARTERIES ON SLIDE #5.

* Nose

Lumen

Fungus

Mild

Lumen

Inflammation

Suppurative, Mild

* Pancreas

Acinar Cell

Atrophy

Moderate

Polyarteritis

Moderate

Note: POLYARTERITIS TGLs = 2-5

* Preputial Gland

Atrophy

Mild

* Skin

Keratoacanthoma

Note: KERATOACANTHMA TGLs = 1-21

* Stomach

Glandular

Polyarteritis

Mild

* Testes

Bilateral, Interstit Cell

Adenoma

Atrophy

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 76

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031594

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Cortex	Degeneration	Cystic, Mild
Eye		Cataract	Moderate
	Retina	Degeneration	Moderate
Note: CATARACT	TGLs = 1-44		
Note: DEGEN	TGLs = 1-44		
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Intestine Small	Ileum	Hyperplasia	Lymphoid, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Clear Cell Focus	Mild
	Bile Duct	Hyperplasia	Mild
* Lung	Lymphatic	Foreign Body	Mild
Note: REFRACTIVE MATERIAL IN LUNG LYMPHATICS(CORN OIL)-NO INFLAMM			
Mesentery	Fat	Necrosis	Focal, Mild
Note: NECROSIS	TGLs = 2-21		
* Pancreas	Acinar Cell	Atrophy	Mild
	Acinar Cell	Hyperplasia	Multiple, Moderate
* Parathyroid Gland		Adenoma	
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
* Prostate		Inflammation	Suppurative, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 76	TRT#: 5	SEX: Male	DAY ON TEST: 730
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A84031594

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell Bilateral	Adenoma Atrophy	Moderate
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PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 77

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031595

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large - Cecum
* 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	* Seminal Vesicle
* Skin	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node - Mandibular

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Mixed Cell Focus	Mild
Note: ANOM HEPAT LOB	TGLs = 4-21		
* Lung	Subpleura	Hemorrhage	Mild
Note: HEMORRHAGE	TGLs = 5-4		
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
* Preputial Gland		Atrophy	Moderate
* Spleen		Developmental Malformation	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 2-2		
Note: DEVELOP MALFOR	TGLs = 3-2		
Note: TGL 3-DEFORMITY IS AREA OF INDENTATION CODED AS DEVEL MALFOR			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 77	TRT#: 5	SEX: Male	DAY ON TEST: 730
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A84031595

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA	TGLs = 1-9	Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 78

TRT#: 5

SEX: Male

DAY ON TEST: 668

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029710

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	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Edema	Moderate
Note: TGL 3 IS ON SLIDE I.			
Note: EDEMA TGLs = 3			
Eye		Cataract	Moderate
	Retina	Degeneration	Moderate
Note: CATARACT TGLs = 1			
Note: TGL 1 IS ON SLIDE "J".			
Note: DEGEN TGLs = 1			
* Heart		Inflammation	Chronic, Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	Moderate
		Hyperplasia	Nodular, Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 8-5			
Note: HYPERPLASIA TGLs = 8-5			
Note: ANOM HEPAT LOB TGLs = 9			
Note: TGL 9 IS ON SLIDE III, TGL 10 IS ON SLIDE IV			
Note: HYPERPLASIA TGLs = 10			
* Lung		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 78

TRT#: 5

SEX: Male

DAY ON TEST: 668

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029710

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node	Lymphocyte, Mandibular	Necrosis	Marked
	Lymphocyte, Mesenteric	Necrosis	Marked
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 4			
Note: TGL 4 ON SLIDE II SPERMATIC CORD-FAT-IS CODED AS MESENTERY.			
* Nose	Lumen	Fungus	Moderate
* Pancreas	Acinar Cell	Atrophy	Moderate
		Leukemia Mononuclear	
* Preputial Gland	Duct	Cyst	Moderate
* Prostate		Inflammation	Suppurative, Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-2]			
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 2-7			
Note: HYPERPLASIA TGLs = 2-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 79

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Intestine Large - Rectum	* Mammary Gland	* Nose
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OBSERVATIONS

* Bone Marrow Clitoral GI Note: TGL 2 IS ON SLIDE 7B		Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Hyperplasia Hyperplasia Leukemia Mononuclear	Mild Nodular, Mild
* Lung Note: ALV BRON CARC TGLs = 4-4-1		Alveolar/Bronchiolar Carcinoma Leukemia Mononuclear	
* Mammary GI Note: TGL 1 IS ON SLIDE (I). SLIDE (I) IS MAMMARY GLAND NOT			
* Pancreas	Acinar Cell	Atrophy	Moderate
* Spleen [Leukemia Mononuclear TGLS = 2-2]		Leukemia Mononuclear	
* Testes Note: ADENOMA TGLs = 1-9	Bilateral, Interstit Cell	Adenoma Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 79

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031596

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 80	TRT#: 5	SEX: Male	DAY ON TEST: 561
	DOSE: 225 MG/KG	DISP: Moribund	HISTO: A83028534

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Nose
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland Note: TGL 9 IS ON SLIDE 6B Note: [FIB HISTIOCYT] TGLs = 9	Cortex	Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Bone Marrow		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Heart		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Kidney Note: [FIB HISTIOCYT] TGLs = 10-6		Fibrous Histiocytoma Nephropathy	Metastatic (Uncertain Primary Site) Chronic, Mild
* Liver Note: TGL 3 IS ON SLIDES 5 AND (III). Note: [FIB HISTIOCYT] TGLs = 3-5		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Lung Note: [FIB HISTIOCYT] TGLs = 5-4 Note: SLIDES 4 AND 4B.		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Lymph Node Note: TGL 4 IS ON SLIDE (IV). Note: [FIB HISTIOCYT] TGLs = 4	Inguinal Mediastinal	Fibrous Histiocytoma Fibrous Histiocytoma	Metastatic (Uncertain Primary Site) Metastatic (Uncertain Primary Site)
Mesentery Note: NECROSIS TGLs = 1 Note: TGL 1 IS ON SLIDE (I). Note: SPERMATIC CORD IS CODED AS MESENTERY.	Fat	Fibrous Histiocytoma Necrosis	Metastatic (Uncertain Primary Site) Focal, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 80	TRT#: 5	SEX: Male	DAY ON TEST: 561
	DOSE: 225 MG/KG	DISP: Moribund	HISTO: A83028534

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Minimal
* Preputial Gland		Atrophy	Mild
* Prostate		Inflammation	Suppurative, Marked
Note: INFLAMMATION TGLs = 7-7			
* Seminal Vesicle		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
Skeletal Muscle	Back	Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
Spinal Cord		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Spleen		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
Note: TGL 2 IS ON SLIDES 2B,2C,2D, AND SLIDE (II). Note: [FIB HISTIOCYT] TGLs = 8-2,2-2			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 6-7			
* Thymus		Fibrous Histiocytoma	Metastatic (Uncertain Primary Site)
* Thyroid Gland	Follicle	Hyperplasia	Cystic, Moderate

PRIMARY CAUSE OF DEATH -

Animal Note: PRIMARY SITE FOR FIBROUS HISTIOCYTOMAS IS UNCERTAIN

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 81

TRT#: 5

SEX: Male

DAY ON TEST: 667

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029711

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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 - Mandibular	* Lymph Node - Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Gland Note: DEGEN TGLs = 8 Note: TGL 8 IS ON SLIDE 6B.	Cortex	Degeneration	Cystic, Marked
* Bone Marrow	Myeloid Cell	Hyperplasia	Marked
* Brain Note: RECUT POOR QUALITY AS ORIGINAL SECTION.			
Ear Note: TGL 1 IS ON SLIDE I. Note: SCHWANNOMA MAL TGLs = 1		Schwannoma Malignant	
* Heart Note: TGL 11 ON SLIDE 2B. Note: THROMBUS TGLs = 11	Atrium	Thrombosis	Marked
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hematopoietic Cell Proliferation	Mild
	Bile Duct	Hyperplasia	Minimal
* Lymph Node	Inguinal	Hyperplasia	Lymphoid, Mild
Mesentery Note: TGL 6 IS ON SLIDE IV-CODED AS MESENTERY INSTEAD OF OMENTUM. Note: NECROSIS TGLs = 6	Fat	Necrosis	Focal, Moderate
* Preputial Gland Note: TGL 4 IS ON SLIDE (III)		Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 81	TRT#: 5	SEX: Male	DAY ON TEST: 667
	DOSE: 225 MG/KG	DISP: Moribund	HISTO: A83029711

ORGAN AND ACCOUNTABLE SITE STATUS

[Carcinoma TGLS = 4]			
* Spleen		Hematopoietic Cell Proliferation	Marked
Note: HEMA CELL PROL TGLs = 7-2			
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Marked
Note: ADENOMA TGLs = 5-7			
* Thyroid Gland	C Cell	Hyperplasia	Mild
Zymbal's Gland		Carcinoma	
Note: TGL 2&3 ON SLIDE II			
Note: CARCINOMA TGLs = 2			
Note: CARCINOMA TGLs = 3			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 82

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031597

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Mammary Gland
* Prostate
* Spleen
* Thyroid Gland

* Adrenal Gland - Medulla
* Epididymis
* Intestine Large - Rectum
* Islets, Pancreatic
* Nose
* Salivary Glands
* Stomach - Forestomach
* Trachea

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lymph Node - Mandibular
* Parathyroid Gland
* Seminal Vesicle
* Stomach - Glandular
* Urinary Bladder

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mesenteric
* Preputial Gland
* Skin
* Thymus

MISSING

* Pituitary Gland

OBSERVATIONS

* Heart	Atrium	Congestion Inflammation	Moderate Chronic, Mild
[Inflammation TGLS = 4-2-1]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus Clear Cell Focus	Minimal Multiple, Mild
	Bile Duct	Hyperplasia	Mild
* Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 5-4-1		
Mesentery	Fat	Necrosis	Focal, Mild
Note: NECROSIS	TGLs = 2-21		
* Pancreas	Acinar Cell	Atrophy	Mild
Note: ATROPHY ON SLIDE 5.1			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 1-9		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 83

TRT#: 5

DOSE: 225 MG/KG

SEX: Male

DISP: Moribund

DAY ON TEST: 529

HISTO: A83028297

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Small - Duodenum
* Lung
* Parathyroid Gland
* Seminal Vesicle
* Trachea

* Adrenal Gland - Medulla
* Esophagus
* Intestine Small - Ileum
* Lymph Node - Mandibular
* Pituitary Gland
* Skin

* Bone
* Intestine Large - Cecum
* Intestine Small - Jejunum
* Lymph Node - Mesenteric
* Prostate
* Thymus

* Bone Marrow
* Intestine Large - Colon
* Islets, Pancreatic
* Mammary Gland
* Salivary Glands
* Thyroid Gland

OBSERVATIONS

* Epididymis
Note: MESOTHELIO MAL TGLs = 8-7
* Heart
* Intestine Large
Note: TGL 4 IS ON SLIDE (IV).
Note: MESOTHELIO MAL TGLs = 4
* Kidney
* Liver
* Lymph Node
Note: PIGMENT TGLs = 5-2
Mesentery
Note: MESOTHELIO MAL TGLs = 2-5
Note: TGL 2 IS ON SLIDE (II).
* Nose
* Pancreas
Note: MESOTHELIO MAL TGLs = 9-5
* Preputial Gland
Skeletal Muscle
Note: MESOTHELIO MAL TGLs = 3
Note: TGL 3 IS ON SLIDE (III).

Rectum
Renal Tubule
Mediastinal
Lumen
Lumen
Abdominal

Mesothelioma Malignant
Inflammation
Mesothelioma Malignant
Pigmentation
Mesothelioma Malignant
Vacuolization Cytoplasmic
Pigmentation
Mesothelioma Malignant
Fungus
Inflammation
Mesothelioma Malignant
Atrophy
Mesothelioma Malignant

Chronic, Mild
Marked
Mild
Marked
Mild
Suppurative, Mild
Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 83	TRT#: 5	SEX: Male	DAY ON TEST: 529
	DOSE: 225 MG/KG	DISP: Moribund	HISTO: A83028297

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Mesothelioma Malignant	
* Stomach	Forestomach	Mesothelioma Malignant	
	Glandular	Mesothelioma Malignant	
* Testes	Interstit Cell	Adenoma	
		Atrophy	Marked
	Tunic	Mesothelioma Malignant	

Note: TGL 1 IS ON SLIDE (I).
Note: MESOTHELIO MAL TGLs = 1
Note: ADENOMA TGLs = 7-7
Note: MESOTHELIO MAL TGLs = 7-7

* Urinary Bladder Mesothelioma Malignant

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 84

TRT#: 5

SEX: Male

DAY ON TEST: 704

DOSE: 225 MG/KG

DISP: Dosing Accident

HISTO: A84031598

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Parathyroid Gland	Pituitary Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Spleen	Stomach - Forestomach	Thymus	Trachea
Urinary Bladder			

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Small - Ileum
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OBSERVATIONS

Adrenal Gland Note: PHEOCHROM MAL TGLs = 3-8	Medulla	Pheochromocytoma Malignant	
Heart [Inflammation TGLS = 9-2-1]	Atrium	Congestion Inflammation	Marked Chronic, Mild
Kidney		Nephropathy	Chronic, Moderate
Liver		Congestion	Moderate
	Bile Duct	Hyperplasia	Mild
Lung		Congestion	Moderate
	Lymphatic	Foreign Body	Mild
Note: FOREIGN BODY REFRACTILE PALE MATERIAL(OIL)-NO INFLAMMATION.			
Mammary Gland	Duct	Cyst	Moderate
Pancreas Note: PANCREATIC MASS (POLYARTERITIS) ON SLIDE 8. Note: POLYARTERITIS TGLs = 8-8		Polyarteritis	Moderate
Skin Note: [CYST EPITH INC] TGLs = 1 Note: TGL 1 IS ON SLIDE I.		Cyst Epithelial Inclusion	Moderate
Stomach	Glandular	Polyarteritis	Moderate
Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 84	TRT#: 5	SEX: Male	DAY ON TEST: 704
	DOSE: 225 MG/KG	DISP: Dosing Accident	HISTO: A84031598

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA	TGLs = 2-9	Atrophy	Minimal
Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 85

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031599

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart	Atrium	Congestion Inflammation	Moderate Chronic, Mild
Note: CONGESTION TGLs = 7-2-1			
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Lung	Perivascular	Foreign Body	Mild
Note: FOREIGN BODY YELLOW REFRACTILE MATERIAL(OIL) ADJACENT TO			
Note: VESSEL-NO INFLAMMATION.			
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 2-10			
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 5-1			
* Prostate		Inflammation	Suppurative, Moderate
* Skin		Keratoacanthoma	
Note: KERATOACANTHMA TGLs = 1-21			
* Testes	Interstit Cell	Adenoma Atrophy	Marked
Note: ADENOMA TGLs = 4-9			
Note: ATROPHY TGLs = 3-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 86

TRT#: 5

SEX: Male

DAY ON TEST: 581

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83028678

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* 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	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach - Forestomach	* Stomach - Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Degeneration	Cystic, Mild
	Medulla	Hyperplasia	Focal, Multiple, Moderate
	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Moderate
* Intestine Large	Colon	Fibrosis	Focal, Moderate
	Colon	Ulcer	Moderate
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Mild
	Centrilobular	Degeneration	Mild
	Centrilobular	Necrosis	Mild
* Nose	Lumen	Fungus	Mild
	Lumen	Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Preputial Gland		Carcinoma	
	Duct	Cyst	Marked
		Inflammation	Chronic, Moderate
		Necrosis	Marked

Note: NECROSIS TGLs = 1
 Note: TGL 1 IS ON SLIDE (I).
 Note: CARCINOMA TGLs = 1

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 86

TRT#: 5

SEX: Male

DAY ON TEST: 581

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83028678

ORGAN AND ACCOUNTABLE SITE STATUS

Note: CYST TGLs = 1

* Prostate

Inflammation

Suppurative, Mild

* Thyroid Gland

C Cell

Hyperplasia

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 87

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031600

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Moderate
* Intestine Large	Rectum	Parasite Metazoan	Minimal
* Intestine Small	Ileum	Hyperplasia	Lymphoid, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Mixed Cell Focus	Minimal
		Vacuolization Cytoplasmic	Mild
Mesentery	Fat	Inflammation	Granulomatous, Focal, Moderate
Note: INFLAMMATION TGLs = 3-21			
* Preputial Gland		Atrophy	Moderate
* Spleen		Atrophy	Focal, Moderate
Note: ATROPHY TGLs = 4-2			
* Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-9,2-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 88

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031601

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|------------------------------|---------------------------|-----------------------------|----------------------------|
| * Adrenal Gland - Cortex | * Bone | * Bone Marrow | * Brain |
| * Epididymis | * 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 | * Mammary Gland |
| * Nose | * Parathyroid Gland | * Pituitary Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Spleen | * Stomach - Forestomach |
| * Stomach - Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|-------------------------------|---------------------------|-------------------------|-------------------|
| * Adrenal Gland | Medulla | Pheochromocytoma Benign | |
| * Heart | Atrium | Inflammation | Chronic, Moderate |
| | | Thrombosis | Mild |
| [Inflammation TGLS = 4-2-1] | | | |
| * Intestine Large | Colon | Parasite Metazoan | Minimal |
| * Kidney | Renal Tubule | Mineralization | Minimal |
| | | Nephropathy | Chronic, Mild |
| * Liver | Bile Duct | Hyperplasia | Mild |
| * Pancreas | Acinar Cell | Atrophy | Moderate |
| * Preputial Gland | Duct | Cyst | Moderate |
| | | Inflammation | Suppurative, Mild |
| * Skin | Subcut Tiss | Lipoma | |
| Note: LIPOMA TGLs = 1-21 | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| Note: ADENOMA TGLs = 2-9 | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 89

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031602

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Mammary Gland
* Prostate
* Stomach - Glandular

* Adrenal Gland - Medulla
* Epididymis
* Intestine Large - Rectum
* Islets, Pancreatic
* Parathyroid Gland
* Salivary Glands
* Thymus

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lung
* Pituitary Gland
* Seminal Vesicle
* Trachea

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mesenteric
* Preputial Gland
* Spleen
* Urinary Bladder

OBSERVATIONS

* Heart
* Kidney
* Liver

Note: ANOM HEPAT LOB TGLs = 3-5
* Lymph Node
* Nose

* Pancreas
* Skin
Note: [BASAL CEL CARC] TGLs = 1-21
* Stomach
Note: HYPERPLASIA TGLs = 5-6-1
* Testes

Note: ADENOMA TGLs = 2-9
* Thyroid Gland

Bile Duct

Mandibular
Lumen
Lumen
Acinar Cell

Epithelium, Forestomach

Bilateral, Interstit Cell

C Cell

Inflammation
Nephropathy
Hepatodiaphragmatic Nodule
Hyperplasia

Cyst
Fungus
Inflammation
Atrophy
Basal Cell Carcinoma

Hyperplasia

Adenoma
Atrophy

Adenoma

Chronic, Mild
Chronic, Mild
Mild
Minimal

Multiple, Moderate
Moderate
Suppurative, Moderate
Mild

Mild

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 90

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031603

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Colon
- * Islets, Pancreatic
- * Nose
- * Salivary Glands
- * Stomach - Forestomach
- * Trachea

- * Adrenal Gland - Medulla
- * Epididymis
- * Intestine Large - Rectum
- * Lymph Node - Mandibular
- * Parathyroid Gland
- * Seminal Vesicle
- * Stomach - Glandular
- * Urinary Bladder

- * Bone
- * Esophagus
- * Intestine Small - Duodenum
- * Lymph Node - Mesenteric
- * Pituitary Gland
- * Skin
- * Thymus

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Jejunum
- * Mammary Gland
- * Prostate
- * Spleen
- * Thyroid Gland

OBSERVATIONS

- * Heart
- * Intestine Small
- * Kidney

Ileum

- Inflammation
- Hyperplasia
- Nephropathy

- Chronic, Mild
- Lymphoid, Moderate
- Chronic, Mild

Note: SLIDE STILL HAS LINE OF SEPARATION.
Note: RECUT QUALITY BETTER THAN ORIGINAL.

- * Liver

Bile Duct

- Basophilic Focus
- Degeneration
- Hyperplasia
- Vacuolization Cytoplasmic
- Alveolar/Bronchiolar Adenoma

- Multiple, Minimal
- Cystic, Mild
- Mild
- Minimal

- * Lung

Note: ALV BRON ADEN TGLs = 4-4-1

- * Pancreas
- * Preputial Gland
- * Testes

- Acinar Cell
- Duct
- Bilateral, Interstit Cell
- Interstit Cell

- Atrophy
- Cyst
- Adenoma
- Hyperplasia

- Mild
- Mild
- Mild

Note: ADENOMA TGLs = 1-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 91

TRT#: 5

SEX: Male

DAY ON TEST: 663

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029639

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	Moderate
Note: TGL 4 IS ON SLIDE (III).			
Note: ANOM HEPAT LOB TGLs = 4			
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-10			
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 3			
Note: TGL 3 IS ON SLIDE (II). MESOMETRUIUM IS CODED AS MESENTERY.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-1]			
* Skin	Subcut Tiss	Fibroma	
Note: TGL 2 IS ON SLIDE (I)-FIBROMA-MAST CELL INFILTRATION			
Note: FIBROMA TGLs = 2			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 92

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031604

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Medulla	Pheochromocytoma Benign	
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
Mesentery	Fat	Necrosis	Focal, Mild
Note: NECROSIS TGLs = 2-21			
* Pancreas	Acinar Cell	Atrophy	Mild
* Prostate		Inflammation	Suppurative, Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 1-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 93

TRT#: 5

DOSE: 225 MG/KG

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: A84031605

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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
* Pituitary Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Trachea	* Urinary Bladder	

MISSING

* Prostate

OBSERVATIONS

* Adrenal Gland	Cortex	Hyperplasia	Focal, Mild
* Epididymis		Mesothelioma Malignant	
Note: MESOTHELIO MAL TGLs = 2-9			
* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
* Lymph Node	Mandibular	Cyst	Multiple, Marked
[Cyst TGLS = 1-2]			
* Nose	Lumen	Fungus	Moderate
	Lumen	Inflammation	Suppurative, Moderate
* Pancreas		Polyarteritis	Moderate
Note: POLYARTERITIS TGLs = 7-5			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
	Tunic	Mesothelioma Malignant	
Note: MESOTHELIO MAL TGLs = 3-9			
Note: ADENOMA TGLs = 4-9,5-9			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 93

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031605

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 94

TRT#: 5

SEX: Male

DAY ON TEST: 550

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83028466

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

- | | | | |
|---|---------------------------|-------------------------|-------------------|
| * Adrenal Gland
Note: PHEOCHROM BGN TGLs = 3
Note: TGL 3 ON SLIDE #6B. | Medulla | Pheochromocytoma Benign | |
| * Heart | | Inflammation | Chronic, Moderate |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver
Note: DEGEN TGLs = 4-5 | Centrilobular | Degeneration | Mild |
| * Pancreas | Acinar Cell | Atrophy | Mild |
| * Preputial Gland
Note: CARCINOMA TGLs = 1
Note: SLIDE (I) IS PREPUTIAL GLAND NOT SKIN.
Note: TGL 1 IS ON SLIDE (I). | | Carcinoma | |
| * Prostate | Epithelium | Hyperplasia | Mild |
| * Testes | Bilateral, Interstit Cell | Hyperplasia | Mild |
| * Thyroid Gland | C Cell | Adenoma | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 95

TRT#: 5

SEX: Male

DAY ON TEST: 669

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029712

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
* Preputial Gland		Inflammation	Suppurative, Moderate
* Prostate		Inflammation	Suppurative, Mild
* Skin	Subcut Tiss	Fibroma	
	Subcut Tiss	Necrosis	Marked
Note: NECROSIS	TGLs = 1		
Note: TGL 1 & 2 ARE ON SLIDE I-APPEARS TO BE NECROTIC FIBROMA			
Note: NECROSIS	TGLs = 2		
Note: FIBROMA	TGLs = 2		
Note: FIBROMA	TGLs = 1		
* Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 4-7,3-7		
Note: HEMORRHAGE ASSOCIATED WITH ADENOMA.			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 96

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031606

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

- | | | | |
|---|---------------------------|-------------------------|--------------------|
| * Adrenal Gland
Note: PHEOCHROM BGN TGLs = 5-8 | Bilateral, Medulla | Pheochromocytoma Benign | |
| * Heart
[Inflammation TGLS = 8-2,9-2] | | Inflammation | Chronic, Moderate |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Minimal |
| | Bile Duct | Hyperplasia | Minimal |
| * Lymph Node
Note: TGL 4 IS AXILLARY LYMPH NODE SURROUNDED BY ADIPOSE TISSUE.
Note: HYPERPLASIA TGLs = 4-23 | Axillary | Hyperplasia | Lymphoid, Moderate |
| * Mammary Gland
Note: TGL 2 SKIN IS MAMMARY GL; TISSUE IS NECROTIC.
Note: FIBROADENOMA TGLs = 2-22 | | Fibroadenoma | |
| * Pancreas | Acinar Cell | Hyperplasia | Mild |
| * Preputial Gland | | Atrophy | Moderate |
| * Skin
Note: KERATOACANTHOMA TGLs = 1-21 | | Keratoacanthoma | |
| * Testes
Note: ADENOMA TGLs = 3-9 | Bilateral, Interstit Cell | Adenoma
Atrophy | Minimal |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 97

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031607

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* 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	* Lymph Node - Mandibular	* Lymph Node - Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Cortex Medulla	Degeneration Pheochromocytoma Benign	Cystic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Lung		Carcinoma	Metastatic (Thyroid Gland), Multiple (Thyroid Gland)
[Carcinoma TGLS = 7-4]			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 8-1]			
* Preputial Gland		Atrophy	Mild
Skeletal Muscle	Neck	Carcinoma	Extension (Thyroid Gland), Metastatic (Thyroid Gland)
Note: CARCINOMA TGLs = 6-3			
* Skin	Subcut Tiss	Fibroma Keratoacanthoma	
Note: FIBROMA TGLs = 2-22			
Note: KERATOACANTHOMA TGLs = 1-21			
* Testes	Bilateral, Interstit Cell	Adenoma Atrophy	Mild
Note: ADENOMA TGLs = 5-9			
Note: ATROPHY TGLs = 4-9			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 10-3]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 97

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031607

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 98

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031608

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Rectum
* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland Note: PHEOCHROM MAL TGLs = 3-8	Medulla	Pheochromocytoma Malignant	
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
* Lung Note: TUMOR EMBOLUS IS FROM PHEOCHROMOCYTOMA.	Artery Artery	Embolus Tumor Pheochromocytoma Malignant	Metastatic (Adrenal Gland)
* Mammary Gland	Duct	Cyst	Mild
* Prostate		Inflammation	Suppurative, Moderate
* Skin Note: [CYST EPITH INC] TGLs = 1-21		Cyst Epithelial Inclusion	Moderate
* Testes Note: ADENOMA TGLs = 2-9	Bilateral, Interstit Cell Interstit Cell	Adenoma Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 99

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031609

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|------------------------------|---------------------------|-----------------------------|
| * 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 | * Parathyroid Gland | * Pituitary Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach - Forestomach | * Stomach - Glandular | * Thymus |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|----------------------------------|---------------------------|--|------------------------------|
| * Adrenal Gland | Cortex
Medulla | Accessory Adrenal Cortical Nodule
Pheochromocytoma Malignant | Mild |
| Note: PHEOCHROM MAL TGLs = 3-8 | | | |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | Bile Duct | Hepatodiaphragmatic Nodule
Hyperplasia
Mixed Cell Focus
Vacuolization Cytoplasmic | Mild
Mild
Mild
Mild |
| Note: ANOM HEPAT LOB TGLs = 4-21 | | | |
| * Pancreas | Acinar Cell | Atrophy | Moderate |
| * Preputial Gland | | Atrophy | Moderate |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| | | Atrophy | Mild |
| | Interstit Cell | Hyperplasia | Mild |
| Note: ADENOMA TGLs = 1-9 | | | |
| * Thyroid Gland | C Cell | Hyperplasia | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 100

TRT#: 5

DOSE: 225 MG/KG

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO: A84031610

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

- * Adrenal Gland
Note: PHEOCHROM MAL TGLs = 5-23
Medulla
Pheochromocytoma Malignant
- * Heart
Inflammation
Chronic, Mild
- * Intestine Large
Colon
Parasite Metazoan
Mild
- * Kidney
Nephropathy
Chronic, Marked
- * Liver
Note: NEPHROPATHY TGLs = 6-7
Hepatodiaphragmatic Nodule
Moderate
- * Lung
Note: ANOM HEPAT LOB TGLs = 7-24
Bile Duct
Hyperplasia
Mild
- * Lung
Note: CONGESTION TGLs = 9-4
Congestion
Mild
- Mesentery
Fat
Necrosis
Focal, Mild
- * Pancreas
Acinar Cell
Adenoma
Multiple
- Acinar Cell
Hyperplasia
Moderate
- * Testes
Note: ADENOMA TGLs = 4-5,4-22
Note: HYPERPLASIA TGLs = 4-5
Interstitial Cell
Adenoma
- Interstitial Cell
Atrophy
Moderate
- Hyperplasia
Mild
- Note: ATROPHY TGLs = 3-9

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 100

TRT#: 5

SEX: Male

DAY ON TEST: 730

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031610

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA TGLs = 2-9

* Thyroid Gland

C Cell

Adenoma

C Cell

Carcinoma

Note: CARCINOMA TGLs = 8-3

[Carcinoma TGLS = 8-3]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 101	TRT#: 3	SEX: Male	DAY ON TEST: 729
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033045

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Stomach - Forestomach Stomach - Glandular

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Mediastinal	Hyperplasia	Lymphoid, Mild
Note: HYPERPLASIA TGLs = 2-21			
Mammary GI			
Note: TGL 2 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN			
* Spleen		Leukemia Mononuclear	
Stomach			
Note: THICKENED MUCOSA DUE TO FOLDS			
Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
Note: ADENOMA TGLs = 1-9			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 102

TRT#: 3

SEX: Male

DAY ON TEST: 617

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029049

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum
Islets, Pancreatic	Mammary Gland	Nose	Parathyroid Gland
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Marked
Bone Marrow		Leukemia Mononuclear	
Heart		Inflammation	Chronic, Moderate
Intestine Large	Cecum	Leukemia Mononuclear	
	Colon	Leukemia Mononuclear	
Intestine Small	Ileum	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
Note: LEUKEMIA MONUC TGLs = 7-6,8-6 Note: NEPHROPATHY TGLs = 7-6			
* Liver		Hemorrhage	Moderate
		Hepatodiaphragmatic Nodule	Moderate
		Leukemia Mononuclear	
		Necrosis	Focal, Marked
		Vacuolization Cytoplasmic	Marked
Note: VACUOLIZ CYTO TGLs = 10-5 Note: HEMORRHAGE TGLs = 10-5 Note: LEUKEMIA MONUC TGLs = 10-5 Note: NECROSIS TGLs = 10-5 Note: TGL 11-LIVER IS HDN ON SLIDE V Note: ANOM HEPAT LOB TGLs = 11			
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Inguinal	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 102

TRT#: 3

SEX: Male

DAY ON TEST: 617

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029049

ORGAN AND ACCOUNTABLE SITE STATUS

Mandibular	Leukemia Mononuclear
Mediastinal	Leukemia Mononuclear
Mesenteric	Leukemia Mononuclear
Pancreatic	Leukemia Mononuclear

Note: TGL 9- MESENTERIC LYMPH NODE IS ON SLIDE IV

Note: LEUKEMIA MONUC TGLs = 9

Note: LEUKEMIA MONUC TGLs = 12-2

Note: TGL 5-PANCREATIC LYMPH NODE IS ON SLIDE III

Note: LEUKEMIA MONUC TGLs = 5

Mesentery	Fat	Necrosis	Focal, Moderate
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Note: TGL 3 IS MESENTERY NOT SPERMATIC CORD-LESION IS ON SLIDE II

Note: NECROSIS TGLs = 3

Pancreas	Acinar Cell	Atrophy	Moderate
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Pituitary Gland		Leukemia Mononuclear	
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Preputial Gland		Atrophy	Moderate
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	Duct	Cyst	Moderate
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Prostate		Inflammation	Suppurative, Mild
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		Leukemia Mononuclear	
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Skin	Epidermis	Hyperplasia	Focal, Moderate
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Note: TGL 1-SKIN IS ON SLIDE (I)

Note: [HYPERPLASIA] TGLs = 1

* Spleen		Leukemia Mononuclear	
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Note: TGL 4- SPLEEN IS ON SLIDE 2B.

Note: LEUKEMIA MONUC TGLs = 4-2

Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild

Note: ADENOMA TGLs = 2-7

Note: HYPERPLASIA TGLs = 2-7

Thymus		Leukemia Mononuclear	
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Thyroid Gland	C Cell	Hyperplasia	Mild
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PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 103

TRT#: 3

SEX: Male

DAY ON TEST: 392

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83027683

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	* Liver	Lymph Node - Mesenteric
Nose	Pancreas	Pituitary Gland	Preputial Gland
Prostate	Salivary Glands	Skin	* Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Parathyroid Gland	Thymus
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OBSERVATIONS

Heart		Inflammation	Chronic, Mild
Kidney	Pelvis	Hemorrhage	Moderate
	Medulla	Hydronephrosis	Multiple, Mild
		Necrosis	Moderate
Note: HYDRONEPHROSIS TGLs = 3-6			
Lung		Osteosarcoma	Metastatic (Uncertain Primary Site)
Note: PRIMARY SITE IS UNKNOWN			
Note: OSTEOSARC TGLs = 4-4			
Mammary Gland		Hyperplasia	Lobular, Mild
Mesentery		Inflammation	Chronic, Moderate
Seminal Vesicle	Epithelium	Hyperplasia	Moderate
		Inflammation	Chronic, Moderate
Note: INFLAMMATION TGLs = 2-7			
Note: HYPERPLASIA TGLs = 2-7			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 104	TRT#: 3	SEX: Male	DAY ON TEST: 729
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033046

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Stomach - Forestomach	Stomach - Glandular
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OBSERVATIONS

* Liver	Bile Duct	Hyperplasia Leukemia Mononuclear	Minimal
Lung [Congestion TGLS = 4-4]		Congestion	Mild
Pituitary Gland [Cyst TGLS = 5-1]	Pars Distalis	Cyst	Mild
Seminal Vesicle Note: ATROPHY TGLs = 3-9		Atrophy	Moderate
Skin Note: [BASAL CEL ADEN] TGLs = 1-21		Basal Cell Adenoma	
* Spleen		Leukemia Mononuclear	
Testes Note: ADENOMA TGLs = 2-9	Bilateral, Interstit Cell	Adenoma Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 105

TRT#: 3

SEX: Male

DAY ON TEST: 381

DOSE: 112 MG/KG

DISP: Dosing Accident

HISTO: A82027684

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Brain
Intestine Small - Ileum
Lymph Node - Mandibular
Parathyroid Gland
Seminal Vesicle
Thymus

Adrenal Gland - Medulla
Epididymis
Islets, Pancreatic
Lymph Node - Mesenteric
Pituitary Gland
Skin
Thyroid Gland

Bone
Esophagus
Kidney
Mammary Gland
Preputial Gland
Stomach - Forestomach
Trachea

Bone Marrow
Intestine Small - Duodenum
Liver
Nose
Salivary Glands
Stomach - Glandular
Urinary Bladder

AUTO PRECLUDES DIAG.

Intestine Large - Cecum
Spleen

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Jejunum

OBSERVATIONS

Heart
Lung

Alveolus
Alveolus

Inflammation
Congestion
Edema
Foreign Body

Chronic, Mild
Moderate
Moderate
Mild

Note: OIL IN ALVEOLI-NO INFLAMMATION RESPONSE

Pancreas
Prostate
Testes

Acinar Cell
Interstit Cell

Atrophy
Inflammation
Adenoma

Mild
Suppurative, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 106

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033047

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Salivary Glands

* Spleen

Stomach - Forestomach

Stomach - Glandular

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

Bile Duct

Hyperplasia

Minimal

Note: MIXED CELL FOCUS ON SLIDE 21

Skeletal Muscle

Fibroma

Note: FIBROMA TGLs = 1-21

Note: TGL 1 ON SLIDE 21 IS SKELETAL MUSCLE NOT SALIVARY GLAND

Skin

Epidermis

Hyperplasia

Focal, Moderate

Note: [HYPERPLASIA] TGLs = 4-22

Stomach

Note: THICKENED MUCOSA DUE TO FOLDS WHEN FIXED

Testes

Bilateral, Interstit Cell

Adenoma

Atrophy

Mild

Note: ATROPHY TGLs = 2-9

Note: ADENOMA TGLs = 3-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 107

TRT#: 3

SEX: Male

DAY ON TEST: 645

DOSE: 112 MG/KG

DISP: Dosing Accident

HISTO: A83029491

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Islets, Pancreatic
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Spleen	

OBSERVATIONS

Eye		Cataract	Moderate
Heart		Inflammation	Chronic, Moderate
		Mineralization	Moderate
Kidney		Hydronephrosis	Moderate
	Renal Tubule	Mineralization	Mild
	Pelvis	Necrosis	Marked
Note: NECROSIS TGLs = 8-6			
Note: HYDRONEPHROSIS TGLs = 8-6			
Liver	Bile Duct	Hyperplasia	Mild
Lung		Hemorrhage	Moderate
	Artery	Mineralization	Multiple, Moderate
Mammary Gland	Duct	Cyst	Mild
Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 11-1]			
Preputial Gland	Duct	Cyst	Mild
Prostate		Inflammation	Suppurative, Moderate
		Inflammation	Chronic, Moderate
Seminal Vesicle		Dilatation	Moderate
Note: DILATATION TGLs = 5-7			
Testes	Interstit Cell	Adenoma	
		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 107

TRT#: 3

SEX: Male

DAY ON TEST: 645

DOSE: 112 MG/KG

DISP: Dosing Accident

HISTO: A83029491

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA TGLs = 3-7,4-7

Thyroid GI

Note: TGL 9 RAISED AREA PROBABLY PARATHYROID

Urinary Bladder

Inflammation

Chronic, Moderate

Note: INFLAMMATION TGLs = 6-6

Note: TGL 6 IS ON SLIDE 6B

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 108

TRT#: 3

SEX: Male

DAY ON TEST: 640

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029363

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Lung	Lymph Node - Mesenteric
Pancreas	Parathyroid Gland	Preputial Gland	Seminal Vesicle
Skin	* Spleen	Stomach - Glandular	Thymus
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Heart		Inflammation	Chronic, Moderate
Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
	Bile Duct	Hyperplasia	Minimal
		Vacuolization Cytoplasmic	Mild
Mammary Gland	Duct	Cyst	Mild
Mesentery	Fat	Necrosis	Focal, Mild
Note: TGL 2 IS MESENTERY NOT SPERMATIC CORD AND IS SLIDE II			
Note: NECROSIS TGLs = 2			
Nose	Lumen	Fungus	Mild
	Lumen	Inflammation	Suppurative, Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
Prostate		Inflammation	Suppurative, Mild
Salivary Glands		Schwannoma Malignant	
Note: [SCHWANNOMA MAL] TGLs = 1			
Note: SALIVARY GLAND IS ON SLIDE I			
Stomach	Forestomach	Edema	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 108

TRT#: 3

SEX: Male

DAY ON TEST: 640

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029363

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 109

TRT#: 3

SEX: Male

DAY ON TEST: 658

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029570

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Parathyroid Gland
Pituitary Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Bilateral, Medulla Cortex	Pheochromocytoma Benign Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Inflammation	Chronic, Moderate
Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia Hyperplasia Leukemia Mononuclear Vacuolization Cytoplasmic	Moderate Nodular, Moderate Mild
Note: HYPERPLASIA TGLs = 5-5 Note: LEUKEMIA MONUC TGLs = 5-5 Note: HYPERPLASIA TGLs = 5-5			
Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal Mediastinal Mediastinal	Hemorrhage Hyperplasia Necrosis	Moderate Histiocytic, Moderate Mild
Note: HYPERPLASIA TGLs = 6-2 [Hyperplasia TGLS = 6-2] [Necrosis TGLS = 6-2]			
Mesentery		Inflammation Leukemia Mononuclear	Chronic, Marked
	Fat	Necrosis	Focal, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 109	TRT#: 3	SEX: Male	DAY ON TEST: 658
	DOSE: 112 MG/KG	DISP: Moribund	HISTO: A83029570

ORGAN AND ACCOUNTABLE SITE STATUS

Pancreas	Acinar Cell	Atrophy	Moderate
	Acinar Cell	Hyperplasia	Mild
		Leukemia Mononuclear	
* Spleen		Hematopoietic Cell Proliferation	Moderate
		Leukemia Mononuclear	
		Necrosis	Mild
Note: LEUKEMIA MONUC	TGLs = 4-2		
[Hematopoietic Cell Proliferation	TGLS = 4-2]		
Testes	Interstit Cell	Adenoma	
		Atrophy	Marked
Note: ATROPHY	TGLs = 2-7		
Note: ADENOMA	TGLs = 3-7		
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 110	TRT#: 3	SEX: Male	DAY ON TEST: 729
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033048

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen	Stomach - Forestomach	Stomach - Glandular
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OBSERVATIONS

* Liver	Bile Duct	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 1-21			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 2-9		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 111

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033049

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Mammary Gland
Trachea

Pancreas

Stomach - Forestomach

Stomach - Glandular

OBSERVATIONS

Heart
[Congestion TGLS = 7-2-1]

Atrium

Congestion

Marked

* Liver

Bile Duct

Fibrosis
Hepatocellular Carcinoma
Hyperplasia
Leukemia Mononuclear

Mild

Mild

Note: HEPATOCLR CARC TGLs = 6-23,6-24
[Leukemia Mononuclear TGLS = 6-23]

Skin
Subcut Tiss

Fibroma

Multiple

Note: FIBROMA TGLs = 1-21,2-22

Note: TGL 2 ON SLIDE 22 IS SUBCUTIS NOT MAMMARY GLAND

* Spleen
[Leukemia Mononuclear TGLS = 5-2]

Leukemia Mononuclear

Testes
Bilateral, Interstit Cell

Adenoma
Atrophy

Moderate

Note: ATROPHY TGLs = 3-9

Note: ADENOMA TGLs = 4-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 112	TRT#: 3	SEX: Male	DAY ON TEST: 729
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033050

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver	Bile Duct	Hyperplasia	Mild
Skin		Keratoacanthoma	
Note: KERATOACANTHMA	TGLs = 1-21		
Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
Note: ADENOMA	TGLs = 3-7		
Note: ATROPHY	TGLs = 2-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 113

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033051

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	
	Alveolus	Pigmentation	Mild
Mammary Gland	Duct	Cyst	Moderate
Note: CYST	TGLs = 1-8		
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 4-1		
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 2-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 114

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033052

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Bile Duct

Basophilic Focus

Multiple, Mild

Hyperplasia

Mild

Inflammation

Granulomatous, Multiple, Mild

Skin

Subcut Tiss

Fibroma

Keratoacanthoma

Note: FIBROMA TGLs = 1-21

Note: KERATOACANTHOMA TGLs = 2-22

Testes

Interstit Cell

Adenoma

Mild

Interstit Cell

Hyperplasia

Note: HYPERPLASIA TGLs = 3-7

Note: ADENOMA TGLs = 3-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 115

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033053

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Moderate
	Bile Duct	Hyperplasia	Mild
[Hyperplasia TGLS = 5-22]			
Lymph Node	Mesenteric	Angiectasis	Moderate
Note: ANGIECTASIS TGLs = 4-5			
Note: TGL 4 ON SLIDE 23 IS FAT NOT LYMPH NODE			
Mesentery	Fat	Inflammation	Granulomatous, Focal, Moderate
	Fat	Necrosis	Focal, Mild
Note: INFLAMMATION TGLs = 3-23			
Note: NECROSIS TGLs = 3-23			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Mild
[Adenoma TGLS = 6-1]			
[Cyst TGLS = 6-1]			
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA TGLs = 1-21			
Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Minimal
	Interstit Cell	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 2-7			
Note: ADENOMA TGLs = 2-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 116

TRT#: 3

SEX: Male

DAY ON TEST: 712

DOSE: 112 MG/KG

DISP: Dead

HISTO: A84033054

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	* Liver	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Parathyroid Gland	Preputial Gland
Seminal Vesicle	Skin	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Salivary Glands

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Pancreas		

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Inflammation	Chronic, Moderate
Intestine Large	Colon	Parasite Metazoan	Moderate
Islets, Pancreatic		Carcinoma	
Kidney		Nephropathy	Chronic, Marked
Lung	Lymphatic	Foreign Body	Mild
Note: FOREIGN BODY APPEARS TO BE OIL-NO INFLAMMATION			
Mammary Gland	Duct	Cyst	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
[Adenoma TGLS = 2-1]			
[Angiectasis TGLS = 2-1]			
Prostate		Inflammation	Suppurative, Moderate
* Spleen		Atrophy	Moderate
		Pigmentation	Mild
Note: ATROPHY TGLs = 1-6			
Stomach	Epithelium, Forestomach	Hyperplasia	Moderate
	Forestomach	Inflammation	Chronic, Moderate
	Forestomach	Ulcer	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 116

TRT#: 3

SEX: Male

DAY ON TEST: 712

DOSE: 112 MG/KG

DISP: Dead

HISTO: A84033054

ORGAN AND ACCOUNTABLE SITE STATUS

Note: HYPERPLASIA TGLs = 3-4,4-4

Note: ULCER TGLs = 3-4,4-4

[Ulcer TGLS = 3-4,4-4]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 117

TRT#: 3

SEX: Male

DAY ON TEST: 399

DOSE: 112 MG/KG

DISP: Dead

HISTO: A83027685

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Kidney
* Liver	Lymph Node - Mandibular	Nose	Preputial Gland
Salivary Glands	Seminal Vesicle	Skin	Stomach - Glandular
Testes	Trachea	Urinary Bladder	

MISSING

Parathyroid Gland	Thymus
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AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mesenteric
Pancreas	* Spleen	Thyroid Gland	

OBSERVATIONS

Heart		Inflammation	Chronic, Mild
Lung		Congestion	Moderate
	Lymphatic	Foreign Body	Mild
Note: NO INFLAMMATION RESPONSE TO OIL			
Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Carcinoma	
Prostate		Inflammation	Suppurative, Moderate
Stomach	Forestomach	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 118

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033055

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver	Bile Duct	Hyperplasia Vacuolization Cytoplasmic	Mild Mild
Skin Note: HYPERPLASIA TGLs = 1-21	Epidermis	Hyperplasia	Focal, Moderate
Testes Note: ADENOMA TGLs = 3-7 Note: ATROPHY TGLs = 2-7	Bilateral, Interstit Cell	Adenoma Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 119	TRT#: 3	SEX: Male	DAY ON TEST: 729
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033056

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen	Tongue
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OBSERVATIONS

Intest Large
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.

* Liver	Bile Duct	Hyperplasia	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 1-7			
Thyroid Gland	Follicular Cel	Carcinoma	
Note: CARCINOMA TGLs = 2-3			

PRIMARY CAUSE OF DEATH -

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 120

TRT#: 3

SEX: Male

DAY ON TEST: 689

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A84033057

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
	Cortex	Hypertrophy	Focal, Mild
	Medulla	Leukemia Mononuclear	
Heart		Inflammation	Chronic, Moderate
Note: ATYPICAL FIBROSIS.			
Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-2			
Pancreas	Acinar Cell	Atrophy	Moderate
Preputial Gland		Inflammation	Suppurative, Mild
Prostate		Cyst	Moderate
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2-6			
Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 1-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 121

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033058

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

Clitoral G1

Note: TGL 3 IS ON SLIDE II

* Liver

Bile Duct

Hyperplasia

Minimal

Mixed Cell Focus

Multiple, Mild

Testes

Bilateral, Interstit Cell

Adenoma

Atrophy

Minimal

Note: ADENOMA TGLs = 1-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 122

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033059

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

	Bile Duct	Basophilic Focus	Multiple, Mild
		Hyperplasia	Mild
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 1-21		
Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Mild
Note: ADENOMA	TGLs = 2-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 123

TRT#: 3

SEX: Male

DAY ON TEST: 529

DOSE: 112 MG/KG

DISP: Dead

HISTO: A83028298

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Brain
Intestine Small - Ileum
Lymph Node - Mandibular
Pancreas
Skin
Thyroid Gland

Adrenal Gland - Medulla
Epididymis
Islets, Pancreatic
Lymph Node - Mesenteric
Parathyroid Gland
Stomach - Forestomach
Trachea

Bone
Esophagus
* Liver
Mammary Gland
Salivary Glands
Stomach - Glandular
Urinary Bladder

Bone Marrow
Intestine Large - Colon
Lung
Nose
Seminal Vesicle
Thymus

MISSING

Intestine Large - Cecum

Pituitary Gland

AUTO PRECLUDES DIAG.

Intestine Small - Duodenum

Intestine Small - Jejunum

* Spleen

OBSERVATIONS

Heart
Intestine Large
Kidney

Rectum
Transit Epithe

Inflammation
Parasite Metazoan
Carcinoma
Hydronephrosis

Chronic, Moderate
Minimal
Marked

Note: TGL 2 IS ON SLIDE (I)
Note: HYDRONEPHROSIS TGLs = 4
Note: TGL 4 IS ON SLIDE (I)
Note: CARCINOMA TGLs = 2

Preputial Gland
Prostate
Testes

Bilateral, Interstit Cell

Fibrosis
Inflammation
Adenoma

Mild
Suppurative, Mild

Note: ADENOMA TGLs = 1-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 124

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033060

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Eye

OBSERVATIONS

Blood Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 1-61

* Liver Bile Duct Hyperplasia Moderate
Hyperplasia Nodular, Moderate
Leukemia Mononuclear

[Hyperplasia TGLS = 6-6]

[Leukemia Mononuclear TGLS = 6-6]

* Spleen Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 5-6

Testes Bilateral, Interstit Cell Adenoma
Atrophy Moderate
Interstit Cell Hyperplasia Mild

Note: ATROPHY TGLs = 4-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 125

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033061

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

Degeneration

Cystic, Mild

Bile Duct

Hyperplasia

Moderate

Leukemia Mononuclear

Pars Distalis

Adenoma

Pituitary Gland

[Adenoma TGLS = 4-1]

Skin

Basal Cell Adenoma

Fibrosis

Moderate

Note: [BASAL CEL ADEN] TGLs = 1-21

Note: FIBROSIS TGLs = 2-22

* Spleen

Leukemia Mononuclear

Testes

Interstit Cell

Adenoma

Tongue

Hyperkeratosis

Mild

Note: HYPERKERATOSIS TGLs = 5-24

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 126	TRT#: 3	SEX: Male	DAY ON TEST: 555
	DOSE: 112 MG/KG	DISP: Dosing Accident	HISTO: A83028467

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Islets, Pancreatic	Kidney
Liver	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Small - Ileum	Intestine Small - Jejunum	Spleen
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OBSERVATIONS

Eye		Cataract	Marked
Heart		Inflammation	Chronic, Mild
Lung		Congestion	Moderate
Note: CONGESTION	TGLs = 4-4		
Preputial Gland		Atrophy	Moderate
Skin	Subcut Tiss	Fibroma	
Note: TGL 1 IS SKIN/SUBCUTIS ON SLIDE (I)			
Note: FIBROMA	TGLs = 1		
Testes	Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 2-7		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 127

TRT#: 3

SEX: Male

DAY ON TEST: 588

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83028758

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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	Nose	Pancreas
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Skin
Stomach - Glandular	Thymus	Trachea	Urinary Bladder

MISSING

Adrenal Gland - Medulla

OBSERVATIONS

Adrenal Gland Note: TGL 3 IS ON SLIDE 6B Note: VACUOLIZ CYTO TGLs = 3-6	Cortex	Vacuolization Cytoplasmic	Mild
Brain		Compression	Marked
Epididymis		Mesothelioma Malignant	
Kidney Note: NEPHROPATHY TGLs = 4-6		Nephropathy	Chronic, Moderate
* Liver Note: VACUOLIZ CYTO TGLs = 8-5		Vacuolization Cytoplasmic	Marked
Mammary Gland Note: CYST TGLs = 1-8	Duct	Cyst	Moderate
Mesentery Note: NECROSIS TGLs = 7 Note: TGL 7 IS ON SLIDE (II)	Fat Fat	Mineralization Necrosis	Focal, Mild Focal, Moderate
Pituitary Gland [Adenoma TGLS = 9-1]	Pars Distalis	Adenoma	
Preputial Gland		Atrophy	Moderate
	Duct	Cyst	Moderate
Prostate		Inflammation	Suppurative, Mild
* Spleen		Mesothelioma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 127	TRT#: 3	SEX: Male	DAY ON TEST: 588
	DOSE: 112 MG/KG	DISP: Moribund	HISTO: A83028758

ORGAN AND ACCOUNTABLE SITE STATUS

Stomach	Forestomach Epithelium, Forestomach Forestomach	Fibrosis Hyperplasia Ulcer	Chronic, Marked Marked Marked
Note: TGL 5-STOMACH IS ON SLIDE (I) Note: ULCER TGLs = 5			
Testes	Interstit Cell Tunic	Adenoma Atrophy Mesothelioma Malignant	Marked
Note: ADENOMA TGLs = 2-7			
Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 128

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033062

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

* Spleen

OBSERVATIONS

Adrenal Gland

Bilateral, Medulla

Pheochromocytoma Benign

Note: PHEOCHROM BGN TGLs = 6-6-1

* Liver

Bile Duct

Hyperplasia

Mild

Mixed Cell Focus

Multiple, Mild

Mammary GI

Note: TGL 3 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN

Mesentery

Fat

Necrosis

Focal, Moderate

Note: NECROSIS TGLs = 5-24

Skin

Subcut Tiss

Basal Cell Adenoma

Fibroma

Multiple

Note: [BASAL CEL ADEN] TGLs = 1-21

Note: FIBROMA TGLs = 2-22,3-23

Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA TGLs = 4-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 129

TRT#: 3

SEX: Male

DAY ON TEST: 618

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029050

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Prostate	Salivary Glands	Seminal Vesicle
Skin	* Spleen	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla Cortex	Pheochromocytoma Benign Vacuolization Cytoplasmic	Mild
Note: TGL 4 IS ON SLIDE 6B Note: PHEOCHROM BGN TGLs = 4-6			
Heart		Inflammation	Chronic, Moderate
Note: INFLAMMATION TGLs = 7-2			
Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus Vacuolization Cytoplasmic	Mild Mild
Note: VACUOLIZ CYTO TGLs = 6-5			
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Preputial Gland	Duct	Carcinoma Cyst Inflammation	Moderate Suppurative, Marked
Note: CARCINOMA TGLs = 2 Note: TGL 1 & 2 ARE ON SLIDE 1 Note: INFLAMMATION TGLs = 2 Note: INFLAMMATION TGLs = 1 Note: CARCINOMA TGLs = 1			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 129	TRT#: 3	SEX: Male	DAY ON TEST: 618
	DOSE: 112 MG/KG	DISP: Moribund	HISTO: A83029050

ORGAN AND ACCOUNTABLE SITE STATUS

Stomach	Forestomach	Edema	Moderate
Testes	Bilateral, Interstit Cell	Adenoma	
	Bilateral, Interstit Cell	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 3-7		
Note: ADENOMA	TGLs = 3-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 130

TRT#: 3

SEX: Male

DAY ON TEST: 571

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83028594

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Inflammation	Chronic, Mild
Intestine Large	Rectum	Parasite Metazoan	Mild
Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
Lung	Artery	Embolus Tumor	Multiple
Note: EMBOLUS TUMOR IS METASTATIC WITH PRIMARY SITE OF SKIN			
Nose	Lumen	Fungus	Mild
	Lumen	Inflammation	Suppurative, Mild
Preputial Gland		Fibrosis	Moderate
Note: FIBROSIS TGLs = 1-7			
Skin	Subcut Tiss	Myxosarcoma	
Note: TGL 2 IS ON SLIDE (I)			
Note: MYXOSARCOMA TGLs = 2			
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 1-7			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 131

TRT#: 3

DOSE: 112 MG/KG

SEX: Male

DISP: Moribund

DAY ON TEST: 690

HISTO: A84033063

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Epididymis
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	Nose	Parathyroid Gland
Preputial Gland	Salivary Glands	Seminal Vesicle	Skin
* Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Tissue NOS	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN	TGLs = 5-6-1		
Brain		Compression	Marked
Note: COMPRESSION	TGLs = 9-1		
Heart		Inflammation	Chronic, Moderate
Intestine Small	Jejunum	Metaplasia	Osseous, Moderate
Note: METAPL	TGLs = 6-22		
Kidney		Nephropathy	Chronic, Moderate
Note: NEPHROPATHY	TGLs = 4-5		
* Liver	Bile Duct	Hyperplasia	Minimal
Mammary Gland	Duct	Adenocarcinoma	Moderate
Note: CYST	TGLs = 1-8		
Note: ADENOCARC	TGLs = 2-21		
Pancreas	Acinar Cell	Hyperplasia	Mild
Note: ACINAR CELL HYPERPLASIA ON SLIDE 4.			
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 8-1		
Prostate		Inflammation	Suppurative, Moderate
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 3-7		
Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 131

TRT#: 3

SEX: Male

DAY ON TEST: 690

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A84033063

ORGAN AND ACCOUNTABLE SITE STATUS

Tissue NOS

Note: TISSUE NOS IS TGL 2 ON SLIDE 21 IS MAMMARY GLAND

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 132

TRT#: 3

SEX: Male

DAY ON TEST: 708

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A84033064

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	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	Nose
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Thymus

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow	Myeloid Cell	Hyperplasia	Marked
Heart		Inflammation	Chronic, Mild
Kidney		Lipoma	
		Nephropathy	Chronic, Mild
Note: [LIPOMA] TGLs = 5-5			
* Liver		Hematopoietic Cell Proliferation	Minimal
		Vacuolization Cytoplasmic	Minimal
Lung		Inflammation	Granulomatous, Mild
Lymph Node	Inguinal	Cyst	Moderate
Mammary Gl			
Note: TGL 1 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN			
Pancreas	Acinar Cell	Atrophy	Marked
Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
Preputial Gland	Bilateral	Carcinoma	
		Inflammation	Suppurative, Moderate
Note: CARCINOMA TGLs = 1-21,2-22			
Note: INFLAMMATION TGLs = 1-21,2-22			
* Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 4-6			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 132	TRT#: 3	SEX: Male	DAY ON TEST: 708
	DOSE: 112 MG/KG	DISP: Moribund	HISTO: A84033064

ORGAN AND ACCOUNTABLE SITE STATUS

Testes	Bilateral, Interstit Cell	Adenoma	
	Bilateral, Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 3-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 133

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033065

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

Bile Duct

Hyperplasia

Mild

Lung

Alveolus

Pigmentation

Mild

[Pigmentation TGLs = 4-2]

Seminal Vesicle

Dilatation

Moderate

Note: DILATATION TGLs = 3-7

Skin

Keratoacanthoma

Note: KERATOACANTHOMA TGLs = 1-21

Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA TGLs = 2-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 134

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033066

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

Blood Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 1-61

Heart Congestion Marked

[Congestion TGLs = 6-5-1]

* Liver Basophilic Focus Multiple, Mild

Bile Duct Hyperplasia Mild

Leukemia Mononuclear

Lung Leukemia Mononuclear

[Leukemia Mononuclear TGLs = 7-2]

Preputial Gland Carcinoma Inflammation Suppurative, Moderate

Note: TGL 3 ON SLIDE 22 IS PREPUTIAL GLAND NOT SKIN

Note: INFLAMMATION TGLs = 3-22

Note: CARCINOMA TGLs = 3-22

Skin Cyst Epithelial Inclusion Moderate

Note: [CYST EPITH INC] TGLs = 2-21

Testes Bilateral, Interstit Cell Adenoma Atrophy Mild

Note: ADENOMA TGLs = 4-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 135

TRT#: 3

SEX: Male

DAY ON TEST: 590

DOSE: 112 MG/KG

DISP: Dead

HISTO: A83028759

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Lymph Node - Mesenteric	Mammary Gland	Nose
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	

MISSING

Preputial Gland	Urinary Bladder
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Medulla	Pheochromocytoma Malignant	
Note: TGL 2 IS ON SLIDE I.			
Note: PHEOCHROM MAL TGLs = 2			
Heart		Inflammation	Chronic, Moderate
Kidney		Nephropathy	Chronic, Moderate
Note: NEPHROPATHY TGLs = 3-6			
* Liver		Congestion	Marked
Lung		Congestion	Moderate
Lymph Node	Mandibular	Hyperplasia	Lymphoid, Moderate
Pancreas	Acinar Cell	Atrophy	Moderate
* Spleen		Congestion	Marked
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 1-7			
Note: ADENOMA TGLs = 1-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 136

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033067

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver			Basophilic Focus	Multiple, Mild
Mesentery		Fat	Necrosis	Focal, Moderate
Note: NECROSIS	TGLs = 1-21-1			
Testes		Bilateral, Interstit Cell	Adenoma	
			Atrophy	Mild
Note: ADENOMA	TGLs = 4-7,4-7-1			
Thyroid Gland		C Cell	Adenoma	
[Adenoma TGLS = 2-3]				
Tongue			Hemorrhage	Focal, Mild
Note: HEMORRHAGE	TGLs = 3-22			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 137

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033068

OBSERVATIONS

* Liver

Bile Duct

Basophilic Focus
Hyperplasia
Leukemia Mononuclear

Multiple, Mild
Mild

Mammary GI

Note: FIBROADENOMA ALSO ON SLIDE 8

* Spleen

Testes

Bilateral, Interstit Cell

Leukemia Mononuclear
Adenoma
Atrophy

Moderate

Note: ATROPHY TGLs = 1-7

Note: ADENOMA TGLs = 2-7

Tongue

Note: PAPILLOMA SQUA TGLs = 3-21

Squamous Cell Papilloma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 138

TRT#: 3

SEX: Male

DAY ON TEST: 593

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83028760

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	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	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	* Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Medulla	Hemorrhage	Marked
	Medulla	Pheochromocytoma Benign	
Note: TGL 6 IS ON SLIDE 6B			
Note: HEMORRHAGE TGLs = 6-6			
Note: PHEOCHROM BGN TGLs = 6-6			
Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
Mesentery	Fat	Necrosis	Focal, Marked
Note: TGL 7 IS ON SLIDE III			
Note: NECROSIS TGLs = 7			
Preputial Gland		Carcinoma	
		Inflammation	Suppurative, Moderate
Note: CARCINOMA TGLs = 2			
Note: INFLAMMATION TGLs = 3			
Note: TGL 2 IS ON SLIDE I; TGL 3 IS ON SLIDE II			
[Inflammation TGLS = 2]			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 4-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 139

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033069

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

Intestine Large Note: POLYP ADENOMAT TGLs = 3-22	Colon	Polyp Adenomatous	
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
Skin Note: BASAL CEL ADEN TGLs = 1-21		Basal Cell Adenoma	
Testes Note: ADENOMA TGLs = 2-7	Bilateral, Interstit Cell	Adenoma	
Thyroid Gland [Carcinoma TGLS = 4-3]	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 140

TRT#: 3

SEX: Male

DAY ON TEST: 489

DOSE: 112 MG/KG

DISP: Dead

HISTO: A83028005

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	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	Nose
Pancreas	Parathyroid Gland	Preputial Gland	Salivary Glands
Seminal Vesicle	Skin	* Spleen	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Brain		Hemorrhage	Mild
Heart		Inflammation	Chronic, Mild
Kidney		Nephropathy	Chronic, Mild
Lung		Congestion	Marked
Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1]			
Prostate		Inflammation	Suppurative, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 141

TRT#: 3

SEX: Male

DAY ON TEST: 718

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A84033070

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Jejunum	Islets, Pancreatic	Nose	Pancreas
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Inflammation	Chronic, Moderate
Intestine Small	Ileum	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
* Liver	Bile Duct	Nephropathy	Chronic, Mild
		Hyperplasia	Mild
		Hyperplasia	Nodular, Marked
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-6		
Note: HYPERPLASIA	TGLs = 7-6		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 9-2,8-2		
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-7		
Note: TGL 5-PANCREAS IS PANCREATIC LYMPH NODE			
Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 141	TRT#: 3	SEX: Male	DAY ON TEST: 718
	DOSE: 112 MG/KG	DISP: Moribund	HISTO: A84033070

ORGAN AND ACCOUNTABLE SITE STATUS

Preputial Gland		Hyperplasia Inflammation	Marked Suppurative, Marked
Note: HYPERPLASIA	TGLs = 2-22		
Note: INFLAMMATION	TGLs = 2-22		
Prostate		Cyst Inflammation	Multiple, Moderate Chronic, Moderate
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA	TGLs = 1-21		
Note: SLIDE 21-SKIN IS FIBROMA			
Note: SLIDE 22-SKIN IS PREPUTIAL GLAND			
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-6		
Stomach	Forestomach Epithelium, Forestomach Forestomach	Hyperkeratosis Hyperplasia Inflammation	Marked Moderate Chronic, Moderate
Note: INFLAMMATION	TGLs = 10-4		
Note: HYPERKERATOSIS	TGLs = 10-4		
Note: HYPERPLASIA	TGLs = 10-4		
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 3-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 143

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033072

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

Brain		Astrocytoma Malignant	
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
Lung		Congestion	Mild
[Congestion TGLS = 3-2]			
Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 1-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 144	TRT#: 3	SEX: Male	DAY ON TEST: 730
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033073

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Parathyroid Gland * Spleen

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 1-7,2-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 145 **TRT#:** 3 **SEX:** Male **DAY ON TEST:** 674
DOSE: 112 MG/KG **DISP:** Moribund **HISTO:** A83029779

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Inflammation	Chronic, Mild
	Atrium	Thrombosis	Moderate
Note: THROMBUS TGLs = 6-2			
Intestine Small	Ileum	Leukemia Mononuclear	
Kidney	Renal Tubule	Pigmentation	Mild
Note: PIGMENT TGLs = 3-6			
* Liver	Centrilobular	Degeneration	Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-5			
Note: DEGEN TGLs = 5-5			
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Cyst	Mild
	Mandibular	Leukemia Mononuclear	
Pancreas	Acinar Cell	Atrophy	Mild
Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Focal, Mild
Preputial Gland		Inflammation	Suppurative, Mild
* Spleen		Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
		Atrophy	Marked
Note: ADENOMA TGLs = 1-7			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 145

TRT#: 3

SEX: Male

DAY ON TEST: 674

DOSE: 112 MG/KG

DISP: Moribund

HISTO: A83029779

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ATROPHY TGLs = 2-7

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 146

TRT#: 3

SEX: Male

DAY ON TEST: 533

DOSE: 112 MG/KG

DISP: Dead

HISTO: A83028322

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Brain
Epididymis	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

OBSERVATIONS

Bone Marrow		Leukemia Mononuclear	
Heart		Inflammation	Chronic, Moderate
* Liver		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-5			
Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Hemorrhage	Moderate
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
[Hemorrhage TGLS = 6-2]			
[Leukemia Mononuclear TGLS = 6-2]			
Preputial Gland	Duct	Cyst	Moderate
		Inflammation	Suppurative, Mild
* Spleen		Hemorrhage	Marked
		Leukemia Mononuclear	
		Necrosis	Marked
Note: NECROSIS TGLs = 4			
Note: LEUKEMIA MONUC TGLs = 3-2			
Note: TGL 4 IS ON SLIDE I			
Note: HEMORRHAGE TGLs = 4			
Note: LEUKEMIA MONUC TGLs = 4-2			
Note: TGL 4 IS ON SLIDE 2B			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 146	TRT#: 3	SEX: Male	DAY ON TEST: 533
	DOSE: 112 MG/KG	DISP: Dead	HISTO: A83028322

ORGAN AND ACCOUNTABLE SITE STATUS

Stomach	Forestomach	Edema	Moderate
	Forestomach	Inflammation	Chronic, Moderate
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 2-7		

PRIMARY CAUSE OF DEATH -

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 147	TRT#: 3	SEX: Male	DAY ON TEST: 730
	DOSE: 112 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033074

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Skin

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Minimal
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 3-22]			
Mammary Gland		Fibroadenoma	
Note: TGL 1 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN			
Note: FIBROADENOMA TGLs = 1-21			
* Spleen		Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 2-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 148

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033075

OBSERVATIONS

* Liver

Bile Duct

Basophilic Focus

Multiple, Mild

Hyperplasia

Mild

Leukemia Mononuclear

Keratoacanthoma

Skin

Note: KERATOACANTHOMA TGLs = 1-21

* Spleen

Leukemia Mononuclear

Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA TGLs = 3-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 149

TRT#: 3

SEX: Male

DAY ON TEST: 721

DOSE: 112 MG/KG

DISP: Dead

HISTO: A84033076

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

AUTO PRECLUDES DIAG.

Intestine Small - Ileum

OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Eye		Cataract	Moderate
Note: CATARACT	TGLs = 1-44		
Heart		Inflammation	Chronic, Moderate
Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
	Bile Duct	Hyperplasia	Mild
Lung		Congestion	Moderate
	Lymphatic	Foreign Body	Mild
Note: FOREIGN BODY APPEARS TO BE OIL WITH NO INFLAMMATION			
Mammary Gland	Duct	Cyst	Mild
Note: CYST	TGLs = 2-8-1		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hemorrhage	Marked
Note: ADENOMA	TGLs = 4-1		
Preputial Gland		Inflammation	Suppurative, Mild
Prostate		Inflammation	Suppurative, Moderate
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 3-7		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 149

TRT#: 3

SEX: Male

DAY ON TEST: 721

DOSE: 112 MG/KG

DISP: Dead

HISTO: A84033076

ORGAN AND ACCOUNTABLE SITE STATUS

Note: HYPERPLASIA TGLs = 3-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 150

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 112 MG/KG

DISP: Terminal Sacrifice

HISTO: A84033077

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver	Bile Duct	Hyperplasia Vacuolization Cytoplasmic	Minimal Mild
Mammary GI Note: TGL 2 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN			
Prostate [Cyst TGLS = 2-21]		Cyst	Multiple, Moderate
Testes Note: ADENOMA TGLs = 1-7	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 1	TRT#: 2	SEX: Female	DAY ON TEST: 730
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031531

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Minimal
* Liver		Angiectasis	Mild
		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Moderate
		Necrosis	Focal, Mild
Note: ANOM HEPAT LOB TGLs = 4-22			
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: CYST TGLs = 1-10,1-21			
Note: TGL 2 IS ON SLIDE 21-SKIN IS ACTUALLY MAMMARY GLAND.			
Note: FIBROADENOMA TGLs = 2-21			
* Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 5-1			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild
		Ultimobranchial Cyst	Mild
* Uterus		Polyp Stromal	
Note: POLYP STROMAL TGLs = 3-9			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 2

TRT#: 2

SEX: Female

DAY ON TEST: 498

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028086

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Small - Duodenum
- * Kidney
- * Pancreas
- * Stomach - Forestomach
- * Trachea

- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Mammary Gland
- * Parathyroid Gland
- * Stomach - Glandular
- * Urinary Bladder

- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Nose
- * Salivary Glands
- * Thymus
- * Uterus

- * Clitoral Gland
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Ovary
- * Skin
- * Thyroid Gland

OBSERVATIONS

- * Adrenal Gland

Cortex
Cortex

Angiectasis
Degeneration

Marked
Cystic, Mild

Note: TGL 3 ON SLIDE 6B.

Note: ANGIECTASIS TGLs = 3

- * Bone Marrow
- * Heart
- * Liver

Note: LEUKEMIA MONUC TGLs = 6-5,5-5

Myelofibrosis
Inflammation
Leukemia Mononuclear

Moderate
Chronic, Mild

- * Lung
- * Lymph Node

Mandibular
Mediastinal
Mesenteric
Pancreatic

Leukemia Mononuclear
Leukemia Mononuclear
Leukemia Mononuclear
Leukemia Mononuclear
Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 4

Note: TGL 4 ON SLIDE 6B.

Note: TGL 2 IS ON SLIDE I.

[Leukemia Mononuclear TGLS = 2]

- * Pituitary Gland

Pars Distalis

Cyst

Mild

Note: CYST TGLs = 7-1

- * Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 3	TRT#: 2	SEX: Female	DAY ON TEST: 730
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031532

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	Blood	* 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	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Uterus			

OBSERVATIONS

* Adrenal Gland	Cortex	Hematopoietic Cell Proliferation	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Blood			
Note: BLOOD SMEAR-NOT REMARKABLE.			
* Bone Marrow		Myelofibrosis	Marked
* Kidney		Leukemia Mononuclear	
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-5			
* Lung		Leukemia Mononuclear	
* Lymph Node	Mandibular	Hyperplasia	Lymphoid, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 3-10			
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Focal, Moderate
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-2			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild
	Transit Epithe	Papilloma	Multiple

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 3

TRT#: 2

SEX: Female

DAY ON TEST: 730

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031532

ORGAN AND ACCOUNTABLE SITE STATUS

Note: PAPILLOMA TGLs = 6-8

Note: HYPERPLASIA TGLs = 6-8

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 4	TRT#: 2 DOSE: VEHICLE CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 730 HISTO: A84031533
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lung		Alveolar/Bronchiolar Carcinoma	
* Mammary Gland	Duct	Cyst	Moderate
		Fibroadenoma	
Note: CYST TGLs = 3-22,2-10			
Note: FIBROADENOMA TGLs = 3-22			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Skin			
Note: SLIDE 21-SKIN NOT FOUND BY TRIMMER-ALOPECIA.			
Note: SKIN TGL 3 IS MAMMARY GLAND.			
* Uterus		Decidual Reaction	Mild
		Dilatation	Mild
	Endometrium	Fibrosis	Moderate
		Inflammation	Suppurative, Mild
		Polyp Stromal	
Note: FIBROSIS TGLs = 5-9			
Note: POLYP STROMAL TGLs = 4-9			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 5	TRT#: 2	SEX: Female	DAY ON TEST: 316
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83027690

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* 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	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Esophagus Note: INFLAMMATION TGLs = 3 Note: TGL 3 IS ON SLIDE (II).	Serosa	Inflammation	Chronic, Moderate
Mesentery Note: INFLAMMATION TGLs = 1-2 Note: NECROSIS TGLs = 1	Fat Fat	Inflammation Necrosis	Chronic, Marked Focal, Moderate
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
Skeletal Muscle Note: TGL 2 IS ON SLIDE (II). [Inflammation TGLS = 2]	Diaphragm	Inflammation	Chronic, Marked

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 6	TRT#: 2	SEX: Female	DAY ON TEST: 730
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031534

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Lymph Node - Mandibular	* Lymph Node - Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Adenoma Inflammation	Suppurative, Mild
Note: [ADENOMA] TGLs = 2-22			
Note: INFLAMMATION TGLs = 2-22			
* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus Hepatodiaphragmatic Nodule	Multiple, Mild Mild
Note: ANOM HEPAT LOB TGLs = 4-23			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland	Duct	Cyst Fibroadenoma	Mild
Note: FIBROADENOMA TGLs = 1-21			
Note: CYST TGLs = 3-10,1-21			
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
* Skin			
Note: MASS 21- SKIN IS MAMMARY GLAND.			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 7	TRT#: 2	SEX: Female	DAY ON TEST: 730
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031535

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|------------------------------|---------------------------|-----------------------------|
| * Adrenal Gland - Cortex | * Adrenal Gland - Medulla | * 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 | * Lung | * Lymph Node - Mandibular |
| * Lymph Node - Mesenteric | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach - Forestomach | * Stomach - Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|----------------------------|---------------|------------------|----------------|
| * Clitoral Gland | Duct | Cyst | Moderate |
| * Heart | | Inflammation | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Mild |
| * Mammary Gland | Duct | Cyst | Mild |
| | | Hyperplasia | Lobular, Mild |
| * Pituitary Gland | Pars Distalis | Angiectasis | Moderate |
| | Pars Distalis | Cyst | Mild |
| [Angiectasis TGLS = 1-1] | | | |
| [Cyst TGLS = 1-1] | | | |

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 8	TRT#: 2	SEX: Female	DAY ON TEST: 730
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031536

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Kidney	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Liver	Bile Duct	Basophilic Focus	Multiple, Mild
		Hyperplasia	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: TGL 1 SKIN IS MAMMARY GLAND.			
Note: FIBROADENOMA TGLs = 1-21			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Minimal
[Adenoma TGLS = 2-1]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 9

TRT#: 2

SEX: Female

DAY ON TEST: 726

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A84031537

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Clitoral Gland
* Lymph Node - Mandibular
* Pituitary Gland
* Trachea

* Adrenal Gland - Medulla
* Esophagus
* Nose
* Salivary Glands
* Urinary Bladder

* Bone
* Liver
* Ovary
* Skin
* Uterus

* Brain
* Lung
* Parathyroid Gland
* Thyroid Gland

AUTO PRECLUDES DIAG.

* Bone Marrow
* Intestine Small - Duodenum
* Kidney
* Stomach - Forestomach

* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mesenteric
* Stomach - Glandular

* Intestine Large - Colon
* Intestine Small - Jejunum
* Pancreas
* Thymus

* Intestine Large - Rectum
* Islets, Pancreatic
* Spleen

OBSERVATIONS

* Heart
* Mammary Gland

Inflammation
Fibroadenoma

Chronic, Moderate

Note: FIBROADENOMA TGLs = 1-21

PRIMARY CAUSE OF DEATH

-

Animal Note: EXTENSIVE AUTOLYSIS IN MANY ORGANS.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 10

TRT#: 2

SEX: Female

DAY ON TEST: 651

DOSE: VEHICLE CONTROL

DISP: Dead

HISTO: A83029504

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Lymph Node - Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach - Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node - Mandibular

OBSERVATIONS

* Brain		Compression	Mild
Note: COMPRESSION	TGLs = 9-1		
* Heart		Fibrosarcoma	Metastatic (Lung)
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Centrilobular	Necrosis	Multiple, Marked
		Vacuolization Cytoplasmic	Mild
Note: TGL 2 IS ON SLIDE I.			
Note: VACUOLIZ CYTO	TGLs = 2		
Note: NECROSIS	TGLs = 2-5		
* Lung	Mediastinum	Fibrosarcoma	
		Hemorrhage	Marked
	Mediastinum	Squamous Cell Carcinoma	
Note: SQUAM CEL CARC	TGLs = 3		
Note: TGL 3-MEDIASTINUM IS ON SLIDE II			
Note: HEMORRHAGE	TGLs = 7-4		
Note: FIBROSARC	TGLs = 4-4,5-4,6-4		
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST	TGLs = 1-8		
* Ovary		Cyst	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 8-1]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 10	TRT#: 2	SEX: Female	DAY ON TEST: 651
	DOSE: VEHICLE CONTROL	DISP: Dead	HISTO: A83029504

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Pigmentation	Moderate
* Stomach	Forestomach	Ulcer	Mild
* Thymus		Fibrosarcoma	Metastatic (Lung)
Note: FIBROSARC TGLs = 3			
Note: TGL 3 THYMUS IS ON SLIDE II			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 11

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031538

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* 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
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
* Mammary Gland	Duct	Cyst	Minimal
		Fibroadenoma	
Note: #21 SKIN IS MAMMARY GLAND.			
Note: FIBROADENOMA TGLs = 1-21			
* Pancreas	Acinar Cell	Adenoma	
Note: ADENOMA TGLs = 2-22			
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Moderate
	Pars Distalis	Hyperplasia	Focal, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 12

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031539

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	Mild
	Cortex	Hypertrophy	Focal, Mild
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Pancreas	Acinar Cell	Adenoma	
	Acinar Cell	Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
Note: [ADENOMA] TGLs = 2-1			
* Thyroid Gland	C Cell	Adenoma	
	Follicle	Cyst	Mild
	C Cell	Hyperplasia	Mild
* Uterus	Endometrium	Hyperplasia	Cystic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 13	TRT#: 2	SEX: Female	DAY ON TEST: 663
	DOSE: VEHICLE CONTROL	DISP: Dead	HISTO: A83029642

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Islets, Pancreatic
* Kidney	* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach - Forestomach	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum
* Intestine Small - Ileum	* Intestine Small - Jejunum	* Spleen	* Stomach - Glandular

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Lung		Congestion	Moderate
* Mammary Gland	Duct	Cyst	Mild

Note: CYST TGLs = 1-8

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 14	TRT#: 2	SEX: Female	DAY ON TEST: 731
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031540

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney	Cortex	Cyst	Moderate
Note: CYST	TGLs = 3-7	Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST	TGLs = 1-10		
* Ovary		Cyst	Moderate
Note: CYST	TGLs = 2-9		
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 15

TRT#: 2

SEX: Female

DAY ON TEST: 731

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031541

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Kidney	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone			
Note: BONE IS FROM STERNUM.			
* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Lymphatic	Foreign Body	Mild
Note: REFRACTILE FOREIGN BODY IN LYMPHATIC (CORN OIL). NO INFLAMM.			
* Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 1-21			
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Minimal
* Skin			
Note: SLIDE 21 IS MAMMARY GLAND.			
* Spleen		Pigmentation	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 16

TRT#: 2

SEX: Female

DAY ON TEST: 667

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029719

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum
* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic	* Kidney
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 1-8			
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Moderate
	Pars Distalis	Hyperplasia	Focal, Marked
Note: [HYPERPLASIA] TGLs = 3-1			
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2-2			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 17

TRT#: 2

SEX: Female

DAY ON TEST: 666

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029720

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* 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	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus	Vagina	

OBSERVATIONS

* Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
	Medulla	Leukemia Mononuclear	
* Bone	Calvarium	Hyperostosis	Mild
Note: TGL 7 IS ON SLIDE II.			
Note: HYPEROSTOSIS TGLs = 7			
* Clitoral Gland		Hyperplasia	Moderate
		Inflammation	Suppurative, Marked
Note: HYPERPLASIA TGLs = 2			
Note: TGL 2 IS ON SLIDE 7B.			
Note: INFLAMMATION TGLs = 2			
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
Note: LEUKEMIA MONUC TGLs = 5-5			
* Lung		Leukemia Mononuclear	
* Lymph Node	Mesenteric	Hyperplasia	Lymphoid, Moderate
Note: HYPERPLASIA TGLs = 4			
Note: TGL 4 IS ON SLIDE I IS LYMPH NODE NOT MESENTERY.			
* Mammary Gland	Duct	Cyst	Moderate
* Pituitary Gland		Cyst	Multiple, Minimal
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 17

TRT#: 2

SEX: Female

DAY ON TEST: 666

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029720

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 18	TRT#: 2	SEX: Female	DAY ON TEST: 731
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031542

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland		Adenocarcinoma	
	Duct	Cyst	Moderate
Note: CYST TGLs = 1-10,2-21			
Note: ADENOCARC TGLs = 3-22			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Skin			
Note: SLIDE 21 & 22 IS MAMMARY GLAND.			
* Spleen		Pigmentation	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 19	TRT#: 2	SEX: Female	DAY ON TEST: 731
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031543

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Gland	Cortex	Degeneration	Cystic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Granulomatous, Multiple, Minimal
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	Multiple
Note: TGL 1 & 2 ON SLIDE 21 & 22 ARE MAMMARY GLAND NOT SKIN.			
Note: FIBROADENOMA TGLs = 1-21,2-22			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Dilatation	Mild
Note: DILATATION TGLs = 3-9			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 20

TRT#: 2

SEX: Female

DAY ON TEST: 702

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031544

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Lymph Node - Mesenteric	* Nose	* Parathyroid Gland	* Skin
* Stomach - Glandular	* Thyroid Gland	* Trachea	

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain	Cranial Nerve	Leukemia Mononuclear	
	Meninges	Leukemia Mononuclear	
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 14-2		
* Islets, Pancreatic		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 9-5		
* Kidney		Leukemia Mononuclear	
	Renal Tubule	Pigmentation	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Marked
		Leukemia Mononuclear	
Note: HYPERPLASIA	TGLs = 10-5		
Note: LEUKEMIA MONUC	TGLs = 10-5		
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 13-4		
* Lymph Node	Bronchial	Leukemia Mononuclear	
	Inguinal	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: TGL 1 IS ON SLIDE (I)- SUBCUTIS IS INGUINAL LYMPH NODE.			
Note: LEUKEMIA MONUC	TGLs = 1		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 20

TRT#: 2

SEX: Female

DAY ON TEST: 702

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031544

ORGAN AND ACCOUNTABLE SITE STATUS

Note: LEUKEMIA MONUC TGLs = 16-2
[Leukemia Mononuclear TGLS = 16-2]

* Mammary Gland

Duct

Cyst

Moderate

Mesentery

Leukemia Mononuclear

* Ovary

Leukemia Mononuclear

* Pancreas

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 9-5

* Pituitary Gland

Pars Distalis

Cyst

Mild

* Salivary Glands

Leukemia Mononuclear

Skeletal Muscle

Abdominal

Leukemia Mononuclear

Note: TGL 11 IS ON SLIDE (V).

Note: TGL 12 IS ON SLIDE (VI).

Note: LEUKEMIA MONUC TGLs = 12

Note: LEUKEMIA MONUC TGLs = 11

* Spleen

Leukemia Mononuclear

Note: TGL 7 IS ON SLIDE (IV).

Note: LEUKEMIA MONUC TGLs = 6-2

Note: LEUKEMIA MONUC TGLs = 7

* Stomach

Forestomach

Leukemia Mononuclear

* Thymus

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 15

Note: TGL 15 IS ON SLIDE (VII).

* Urinary Bladder

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 2-8

* Uterus

Endometrium

Hyperplasia

Cystic, Mild

Leukemia Mononuclear

Note: TGL 4 IS ON SLIDE (II).

Note: TGL 5 IS ON SLIDE (III).

Note: LEUKEMIA MONUC TGLs = 5

Note: LEUKEMIA MONUC TGLs = 4

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 21	TRT#: 2	SEX: Female	DAY ON TEST: 732
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031545

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	Mild
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland		Hyperplasia	Lobular, Moderate
Note: HYPERPLASIA TGLs = 1-10			
* Parathyroid Gland		Carcinoma	Metastatic (Thyroid Gland)
Note: EARLY INVASION IN C-CELL.			
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Minimal
* Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 22

TRT#: 2

SEX: Female

DAY ON TEST: 668

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029721

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Parathyroid Gland
- * Stomach - Forestomach
- * Urinary Bladder

- * Adrenal Gland - Medulla
- * Clitoral Gland
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Nose
- * Salivary Glands
- * Stomach - Glandular

- * Bone
- * Esophagus
- * Intestine Small - Duodenum
- * Lung
- * Ovary
- * Skin
- * Thymus

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Pancreas
- * Spleen
- * Trachea

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
	Renal Tubule	Pigmentation	Mild
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: TGL 2 IS ON SLIDE I. SUBCUT TISSUE I IS ACTUALLY MAMMARY GL			
Note: FIBROADENOMA TGLs = 2			
Note: CYST TGLs = 1-8			
* Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 3-1			
* Thyroid Gland		Ultimobranchial Cyst	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 23

TRT#: 2

SEX: Female

DAY ON TEST: 574

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028597

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|----------------------------|------------------------------|---------------------------|
| * Adrenal Gland - Cortex | * Adrenal Gland - Medulla | * Bone | * Bone Marrow |
| * Brain | * Clitoral Gland | * 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 | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Stomach - Forestomach |
| * Stomach - Glandular | * Thymus | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|---------------------------------|---------------|----------------------------------|-------------------|
| * Intestine Large | Colon | Parasite Metazoan | Mild |
| * Kidney | Medulla | Cyst | |
| | | Nephropathy | Chronic, Moderate |
| * Liver | | Basophilic Focus | Multiple, Mild |
| | | Hematopoietic Cell Proliferation | Mild |
| * Mammary Gland | Duct | Adenocarcinoma | |
| | | Cyst | Mild |
| | | Fibroadenoma | |
| Note: TGL 3 IS ON SLIDE II. | | | |
| Note: TGL 2 IS ON SLIDE I. | | | |
| Note: ADENOCARC TGLs = 3 | | | |
| Note: CYST TGLs = 1-8 | | | |
| Note: FIBROADENOMA TGLs = 2 | | | |
| * Pituitary Gland | Pars Distalis | Cyst | Multiple, Mild |
| * Spleen | | Hematopoietic Cell Proliferation | Moderate |
| Note: HEMA CELL PROL TGLs = 4-2 | | | |
| * Thyroid Gland | C Cell | Hyperplasia | Mild |

PRIMARY CAUSE OF DEATH

-

Animal Note: SUBCUTANEOUS TISSUE I & II IS ACTUALLY MAMMARY GLAND.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 24

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031546

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Mammary Gland		Fibroadenoma	Multiple
Note: TGL 1&2 SKIN ARE ACTUALLY MAMMARY GL AND ARE ON SLIDES 21&22			
Note: FIBROADENOMA TGLs = 1-21,2-22			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 25

TRT#: 2

SEX: Female

DAY ON TEST: 556

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028535

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Clitoral Gland		Inflammation	Suppurative, Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Lymph Node	Mesenteric	Depletion Lymphoid	Moderate
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 1-10			
* Pituitary Gland		Cyst	Multiple, Minimal
	Pars Distalis	Hyperplasia	Focal, Mild
* Uterus		Dilatation	Moderate
		Polyp Stromal	
Note: POLYP STROMAL TGLs = 3			
Note: TGL 3 ON SLIDE I IS CERVIX.			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 26

TRT#: 2

SEX: Female

DAY ON TEST: 690

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031547

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Uterus

OBSERVATIONS

* Bone Marrow		Myelofibrosis	Marked
* Clitoral Gland	Duct	Cyst	Moderate
* Kidney	Renal Tubule	Dilatation	Mild
		Fibrosis	Focal, Moderate
		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
Note: LEUKEMIA MONUC TGLs = 5-7,5-7.1			
Note: FIBROSIS TGLs = 5-7			
Note: DILATATION TGLs = 5-7			
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-5			
Note: HYPERPLASIA TGLs = 3-5			
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-4			
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Mild
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
	Pars Distalis	Hyperplasia	Focal, Mild
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 1-2			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 26

TRT#: 2

SEX: Female

DAY ON TEST: 690

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031547

ORGAN AND ACCOUNTABLE SITE STATUS

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 27 TRT#: 2 SEX: Female DAY ON TEST: 732
DOSE: VEHICLE CONTROL DISP: Terminal Sacrifice HISTO: A84031548

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-21,1-21			
Note: TGL 2 ON SLIDE 21 IS MAMMARY GLAND INSTEAD OF SKIN.			
Note: CYST TGLs = 1-10,1-21			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 28

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031549

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Clitoral Gland		Adenoma	
	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
* Pituitary Gland	Pars Distalis	Cyst	Mild
* Spleen		Pigmentation	Moderate
* Uterus	Endometrium	Hyperplasia	Cystic, Moderate
		Polyp Stromal	

Note: POLYP STROMAL TGLs = 2-21

Note: HYPERPLASIA TGLs = 1-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 29

TRT#: 2

SEX: Female

DAY ON TEST: 512

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028184

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Clitoral Gland
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Lymph Node - Mesenteric
- * Parathyroid Gland
- * Thymus
- * Uterus
- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Small - Duodenum
- * Kidney
- * Nose
- * Salivary Glands
- * Thyroid Gland
- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lung
- * Ovary
- * Skin
- * Trachea
- * Bone Marrow
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mandibular
- * Pancreas
- * Stomach - Glandular
- * Urinary Bladder

OBSERVATIONS

- * Brain [Compression TGLS = 4-1] Compression Moderate
- * Heart Inflammation Chronic, Mild
- * Liver Hepatodiaphragmatic Nodule Moderate
- Note: TGL 2 IS ON SLIDE I.
- Note: ANOM HEPAT LOB TGLs = 2
- * Mammary Gland Duct Cyst Mild
- Note: CYST TGLs = 1-8
- * Pituitary Gland Pars Distalis Adenoma
- Note: CYST TGLs = 3-1
- [Adenoma TGLS = 3-1] Cyst Multiple, Moderate
- * Spleen Pigmentation Moderate
- * Stomach Forestomach Edema Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 30

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031550

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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
* Lung	* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	
* Bone	Calvarium	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 1-43			
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
* Mammary Gland	Duct	Cyst	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Moderate
[Adenoma TGLS = 2-1]			
* Uterus	Endometrium	Hyperplasia	Cystic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 31

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031551

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla
* Esophagus
* Intestine Small - Duodenum
* Kidney
* Nose
* Pituitary Gland
* Stomach - Forestomach
* Trachea

* Bone
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lung
* Ovary
* Salivary Glands
* Stomach - Glandular
* Urinary Bladder

* Bone Marrow
* Intestine Large - Colon
* Intestine Small - Jejunum
* Lymph Node - Mandibular
* Pancreas
* Skin
* Thymus

* Brain
* Intestine Large - Rectum
* Islets, Pancreatic
* Lymph Node - Mesenteric
* Parathyroid Gland
* Spleen
* Thyroid Gland

OBSERVATIONS

* Adrenal Gland
* Clitoral Gland
* Heart
* Liver

* Mammary Gland
 Note: CYST TGLs = 1-10
* Uterus
 Note: SARC STROMAL TGLs = 2-21

Cortex
Duct

Bile Duct
Duct

Vacuolization Cytoplasmic
Cyst
Inflammation
Basophilic Focus
Hyperplasia
Cyst

Sarcoma Stromal

Mild
Moderate
Chronic, Mild
Multiple, Mild
Minimal
Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 32

TRT#: 2

SEX: Female

DAY ON TEST: 559

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028536

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* 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	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach - Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Thymus

OBSERVATIONS

* Adrenal Gland	Medulla	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
	Renal Tubule	Pigmentation	Mild
Note: PIGMENT TGLs = 8-6			
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Mild
Note: LEUKEMIA MONUC TGLs = 5-5			
Note: HYPERPLASIA TGLs = 5-5			
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-4			
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2			
[Leukemia Mononuclear TGLS = 1-2]			
[Leukemia Mononuclear TGLS = 6-2]			
* Mammary Gland	Duct	Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 32	TRT#: 2	SEX: Female	DAY ON TEST: 559
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A83028536

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen Note: LEUKEMIA MONUC TGLs = 3 Note: TGL 3 IS ON SLIDE 2B		Leukemia Mononuclear	
* Stomach	Forestomach	Inflammation	Chronic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 33

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031552

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland		Adenoma	
		Hemorrhage	Moderate
		Inflammation	Suppurative, Moderate
Note: [ADENOMA] TGLs = 1-21			
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Lung	Alveolar Epith	Hyperplasia	Mild
* Lymph Node	Mesenteric	Pigmentation	Moderate
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	Multiple
Note: [FIBROADENOMA] TGLs = 2-22,4-24,3-23			
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Cyst	Minimal
	Pars Distalis	Hyperplasia	Focal, Moderate
Note: [HYPERPLASIA] TGLs = 6-1			
[Angiectasis TGLs = 6-1]			
* Skin			
Note: SKIN ON SLIDES 22-24 IS MAMMARY GLAND.			
* Thyroid Gland	Follicular Cel	Carcinoma	
	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 33

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031552

ORGAN AND ACCOUNTABLE SITE STATUS

Note: [HYPERPLASIA] TGLs = 5-3

Note: CARCINOMA TGLs = 5-3

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 34

TRT#: 2

SEX: Female

DAY ON TEST: 512

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028185

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum
* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic	* Kidney
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Pituitary Gland

OBSERVATIONS

Ear

Note: EXTERNAL AND MIDDLE EAR- NOT REMARKABLE.

* Liver

Basophilic Focus
Leukemia Mononuclear

Multiple, Mild

Note: LEUKEMIA MONUC TGLs = 9-5,10-5

* Lung

Leukemia Mononuclear

* Mammary Gland

Duct

Cyst
Hyperplasia

Mild
Lobular, Moderate

Note: CYST TGLs = 4-8

Mesentery

Fat

Fat

Inflammation
Necrosis

Chronic, Moderate
Focal, Moderate

Note: NECROSIS TGLs = 6

Note: MESOMETRIUM IS ON SLIDE IV AND IS CODED AS MESENTERY.

Note: TGL 6 IS ON SLIDE IV.

* Ovary

Cyst

Moderate

* Pituitary Gl

Note: PITUITARY- LOST IN PROCESSING

* Skin

Cyst Epithelial Inclusion
Hemorrhage

Moderate
Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 34

TRT#: 2

SEX: Female

DAY ON TEST: 512

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028185

ORGAN AND ACCOUNTABLE SITE STATUS

Subcut Tiss

Myxosarcoma

Note: TGL-2 IS ON SLIDE (II)

Note: [CYST EPITH INC] TGLs = 1

Note: TGL-5 IS ON SLIDE (III)

Note: HEMORRHAGE ON LIP

Note: HEMORRHAGE TGLs = 2

Note: TGL 1 IS ON SLIDE (I).

[Myxosarcoma TGLS = 5]

* Spleen

Hematopoietic Cell Proliferation

Moderate

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 8-2

[Hematopoietic Cell Proliferation TGLS = 8-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 35

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031553

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Mammary Gland	Duct	Cyst	Moderate
		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-21,3-22			
Note: CYST TGLs = 2-21,1-10			
* Pancreas	Acinar Cell	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-1]			
* Skin			
Note: SKIN ON SLIDE 21 & 22 IS ACTUALLY MAMMARY GLAND.			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild
* Uterus	Endometrium	Fibrosis	Focal, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 36

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031563

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Clitoral Gland	Bilateral	Adenoma	
	Duct	Cyst	Moderate
Eye		Cataract	Multiple, Moderate
	Retina	Degeneration	Moderate
Note: CATARACT	TGLs = 1-44		
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	Multiple
Note: [FIBROADENOMA]	TGLs = 2-21,3-22-10		
Note: CYST	TGLs = 4-10		
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus	Cervix	Cyst	Moderate
		Polyp Stromal	
Note: POLYP STROMAL	TGLs = 5-9		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 37

TRT#: 2

SEX: Female

DAY ON TEST: 688

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031564

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* 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
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver	Bile Duct	Hepatodiaphragmatic Nodule	Moderate
		Hyperplasia	Mild
		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
Note: ANOM HEPAT LOB	TGLs = 7		
Note: TGL 7 IS ON SLIDE I.			
Note: LEUKEMIA MONUC	TGLs = 6-5		
Note: ANOM HEPAT LOB	TGLs = 5		
* Lung		Leukemia Mononuclear	
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Mild
		Hyperplasia	Lobular, Moderate
Note: CYST	TGLs = 1-10		
* Pancreas	Acinar Cell	Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Moderate
Note: CYST	TGLs = 8-1		
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 37

TRT#: 2

SEX: Female

DAY ON TEST: 688

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031564

ORGAN AND ACCOUNTABLE SITE STATUS

Note: LEUKEMIA MONUC TGLs = 3-2-1

* Thyroid Gland

C Cell

Hyperplasia

Mild

* Uterus

Endometrium

Hyperplasia

Cystic, Mild

Polyp Stromal

Note: TGL 2 IS ON SLIDE II. STROMAL POLYP IS NECROTIC.

Note: POLYP STROMAL TGLs = 2

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 38

TRT#: 2

SEX: Female

DAY ON TEST: 556

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028537

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* 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	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Clitoral Gland

OBSERVATIONS

* Bone Marrow	Myeloid Cell	Hyperplasia	Marked
* Heart		Inflammation	Chronic, Moderate
* Intestine Large	Colon	Infiltration Cellular	Lipocyte, Mild
	Colon	Parasite Metazoan	Mild
Note: TGL 3 IS ON SLIDE (III)			
Note: INFILTRAT CELL TGLs = 3			
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland		Fibroadenoma	
Note: TGL 1 IS ON SLIDE I.			
Note: FIBROADENOMA TGLs = 1			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
Vagina		Cyst	Moderate
Note: TGL 2 IS ON SLIDE (II)			
Note: CYST TGLs = 2			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 39

TRT#: 2

SEX: Female

DAY ON TEST: 542

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83028380

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Esophagus
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Pancreas
- * Stomach - Forestomach
- * Trachea

- * Adrenal Gland - Medulla
- * Heart
- * Intestine Small - Duodenum
- * Lymph Node - Mandibular
- * Parathyroid Gland
- * Stomach - Glandular
- * Urinary Bladder

- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mesenteric
- * Salivary Glands
- * Thymus
- * Uterus

- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Nose
- * Skin
- * Thyroid Gland

OBSERVATIONS

- * Bone Marrow
- * Clitoral Gland
- * Kidney
- * Liver

Duct
Renal Tubule

Leukemia Mononuclear
Cyst
Leukemia Mononuclear
Pigmentation
Hyperplasia
Leukemia Mononuclear
Leukemia Mononuclear

Moderate
Moderate
Nodular, Moderate

Note: LEUKEMIA MONUC TGLs = 9-5

- * Lung

Note: TGL 10 IS ON SLIDE 4

Note: LEUKEMIA MONUC TGLs = 10

- * Mammary Gland
- * Ovary
- * Pituitary Gland
- * Spleen

Duct
Pars Distalis

Cyst
Cyst
Angiectasis
Leukemia Mononuclear

Mild
Mild
Mild

Note: TGL 5 IS ON SLIDE 2B

[Leukemia Mononuclear TGLS = 5]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 40

TRT#: 2

SEX: Female

DAY ON TEST: 667

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029722

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* 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	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
* Brain		Compression	Marked
Note: COMPRESSION TGLs = 7-1			
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Mammary Gland	Duct	Cyst	Moderate
		Hyperplasia	Lobular, Moderate
Note: CYST TGLs = 2-8			
Mesentery	Fat	Inflammation	Chronic, Moderate
	Fat	Necrosis	Focal, Mild
Note: NECROSIS TGLs = 3			
Note: TGL 3 IS ON SLIDE I			
Note: SLIDE (I) IS FAT NECROSIS, MESOMETRIUM IS CODED AS MESENTERY			
* Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 6-1			
* Thyroid Gland	Follicular Cel	Hyperplasia	Moderate
Note: HYPERPLASIA TGLs = 5-3			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 41

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031565

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* 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
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Degeneration	Cystic, Moderate
	Medulla	Hyperplasia	Focal, Mild
	Cortex	Hypertrophy	Focal, Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Blood		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 1-46		
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node	Inguinal	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-8		
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: TGL 3 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN.			
Note: CYST	TGLs = 2-21,2-10		
Note: FIBROADENOMA	TGLs = 3-21		
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 41	TRT#: 2	SEX: Female	DAY ON TEST: 732
	DOSE: VEHICLE CONTROL	DISP: Terminal Sacrifice	HISTO: A84031565

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 7-1]	Pars Distalis	Cyst	Multiple, Mild
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-2			
* Thymus		Leukemia Mononuclear	
* Uterus	Cervix	Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 42

TRT#: 2

SEX: Female

DAY ON TEST: 716

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031566

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* 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	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Clitoral Gland

OBSERVATIONS

* Adrenal Gland	Medulla	Pheochromocytoma Benign	
* Brain		Compression	Moderate
Note: COMPRESSION TGLs = 9-1			
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hematopoietic Cell Proliferation	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Mammary Gland	Duct	Adenocarcinoma	
		Cyst	Moderate
		Fibroadenoma	
Note: TGL 3 ON SLIDE (II).			
Note: CYST TGLs = 1-10			
Note: TGL 5&6 ARE ON SLIDE IV.			
Note: ADENOCARC TGLs = 5,6			
Note: [FIBROADENOMA] TGLs = 3			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
[Adenoma TGLS = 7-1]			
[Cyst TGLS = 8-1]			
* Skin	Subcut Tiss	Fibroma	Multiple

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 42	TRT#: 2	SEX: Female	DAY ON TEST: 716
	DOSE: VEHICLE CONTROL	DISP: Moribund	HISTO: A84031566

ORGAN AND ACCOUNTABLE SITE STATUS

Lip	Squamous Cell Papilloma
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Note: TGL 4 ON SLIDE (III)
Note: PAPILLOMA SQUA TGLs = 10
Note: TGL 10 IS ON SLIDE V.
Note: [FIBROMA] TGLs = 2,4
Note: TGL 2 ON SLIDE (I)

* Spleen	Hematopoietic Cell Proliferation	Marked
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PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 43

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031567

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Clitoral Gland		Adenoma	
	Duct	Cyst	Moderate
Note: ADENOMA TGLs = 3-15			
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Minimal
	Serosa	Hemorrhage	Mild
* Lung		Congestion	Mild
Note: CONGESTION TGLs = 6-4			
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	Multiple
Note: TGL 3 ON SLIDE 23 IS MAMMARY GLAND NOT SKIN.			
Note: TGL 1 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN.			
Note: FIBROADENOMA TGLs = 1-21,2-22,3-23			
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
[Cyst TGLS = 7-1]			
* Thymus		Hyperplasia	Lymphoid, Moderate
* Uterus	Endometrium	Hyperplasia	Cystic, Moderate
		Polyp Stromal	
Note: POLYP STROMAL TGLs = 5-9			
Note: HYPERPLASIA TGLs = 4-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 44

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031568

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Rectum	* Intestine Small	* Kidney	* Lung
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Islets, Pancreatic		Adenoma	
Note: ADENOMA	TGLs = 7-24		
* Liver	Bile Duct	Basophilic Focus	Multiple, Mild
		Hyperplasia	Mild
		Leukemia Mononuclear	
Note: HYPERPLASIA	TGLs = 9-5		
Note: LEUKEMIA MONUC	TGLs = 9-5		
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	Multiple
Note: TGL 3 ON SLIDE 22 IS MAMMARY GLAND NOT SKIN.			
Note: TGL 2 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN.			
Note: CYST	TGLs = 1-10,2-21		
Note: FIBROADENOMA	TGLs = 2-21,3-22		
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Cyst	Multiple, Minimal
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
* Uterus	Cervix	Cyst	Moderate
		Dilatation	Moderate
		Polyp Stromal	
Note: POLYP STROMAL	TGLs = 4-23		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 44

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031568

ORGAN AND ACCOUNTABLE SITE STATUS

Note: DILATATION TGLs = 5-9

Note: CYST TGLs = 6-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 45

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031569

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-10			
Mesentery	Fat	Necrosis	Focal, Mild
Note: NECROSIS TGLs = 2-21			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Minimal
[Adenoma TGLS = 3-1]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 46

TRT#: 2

SEX: Female

DAY ON TEST: 683

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031570

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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
* Salivary Glands	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Gland	Cortex	Degeneration	Cystic, Mild
* Brain		Compression	Moderate
[Compression TGLs = 7-1]			
* Clitoral Gland	Duct	Adenoma	
		Cyst	Marked
		Necrosis	Marked
Note: CYST	TGLs = 2,3		
Note: NECROSIS	TGLs = 2,3		
Note: [ADENOMA]	TGLs = 2,3		
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Minimal
		Mixed Cell Focus	Moderate
Note: MIXED CL FOCUS	TGLs = 5		
Note: TGL 5 LIVER-MIXED CELL FOCUS IS ON SLIDE III.			
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 4		
Note: CYST	TGLs = 1-10		
* Ovary		Cyst	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 46

TRT#: 2

SEX: Female

DAY ON TEST: 683

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A84031570

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland

Pars Distalis

Adenoma

Note: ADENOMA

TGLs = 6-1

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 47

TRT#: 2

SEX: Female

DAY ON TEST: 667

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029723

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|------------------------------|---------------------------|-----------------------------|----------------------------|
| * Adrenal Gland - Cortex | * 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 | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Stomach - Forestomach |
| * Stomach - Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|---|---------------|----------------------|-------------------|
| * Adrenal Gland | Medulla | Leukemia Mononuclear | |
| * Bone Marrow | | Leukemia Mononuclear | |
| * Clitoral Gland | Duct | Cyst | Moderate |
| * Kidney | Renal Tubule | Mineralization | Mild |
| * Liver | Bile Duct | Basophilic Focus | Multiple, Minimal |
| | | Hyperplasia | Moderate |
| | | Hyperplasia | Nodular, Moderate |
| | | Leukemia Mononuclear | |
| Note: TGL 9 IS ON SLIDE #III. | | | |
| Note: LEUKEMIA MONUC TGLs = 8-5,7-5,9 | | | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node | Mandibular | Leukemia Mononuclear | |
| | Pancreatic | Leukemia Mononuclear | |
| Note: LEUKEMIA MONUC TGLs = 5 | | | |
| Note: TGL 5 IS ON SLIDE II. | | | |
| * Mammary Gland | Duct | Cyst | Mild |
| | | Fibroadenoma | |
| Note: TGL2 ON SLIDE I-SUBCUTIS-CODED AS TISSUE NOS,BUT MAMMARY GL | | | |
| Note: FIBROADENOMA TGLs = 2 | | | |
| Note: CYST TGLs = 1-8 | | | |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Focal, Moderate |
| Note: HYPERPLASIA TGLs = 10-1 | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 47

TRT#: 2

SEX: Female

DAY ON TEST: 667

DOSE: VEHICLE CONTROL

DISP: Moribund

HISTO: A83029723

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen

[Leukemia Mononuclear TGLS = 6-2]

Leukemia Mononuclear

* Urinary Bladder

Inflammation

Chronic, Focal, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 48

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031571

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* 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	* Nose	* Ovary	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Gland	Medulla Cortex	Hyperplasia Hypertrophy	Focal, Mild Focal, Mild
* Clitoral Gland	Duct	Cyst Hyperplasia	Moderate Moderate
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Basophilic Focus Hyperplasia Inflammation	Multiple, Mild Minimal Granulomatous, Multiple, Mild
* Mammary Gland Note: CYST TGLs = 1-10	Duct	Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Pituitary Gland	Pars Distalis Pars Distalis Pars Distalis	Adenoma Angiectasis Cyst	Marked Multiple, Mild
Note: ADENOMA TGLs = 2-1			
* Thyroid Gland Note: ADDITIONAL RECUTS OF THYROID GL MADE PARATHYROID NOT FOUND.			
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 48

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031571

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 49

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031572

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla
* Esophagus
* Intestine Small - Duodenum
* Lung
* Ovary
* Skin
* Thyroid Gland

* Bone
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mandibular
* Pancreas
* Stomach - Forestomach
* Trachea

* Bone Marrow
* Intestine Large - Colon
* Intestine Small - Jejunum
* Lymph Node - Mesenteric
* Parathyroid Gland
* Stomach - Glandular
* Urinary Bladder

* Brain
* Intestine Large - Rectum
* Islets, Pancreatic
* Nose
* Salivary Glands
* Thymus
* Uterus

OBSERVATIONS

* Adrenal Gland
* Clitoral Gland
* Heart
* Kidney
* Liver

* Mammary Gland
* Pituitary Gland
 [Adenoma TGLS = 1-1]
* Spleen

Cortex
Duct

Duct
Pars Distalis

Adenoma
Cyst
Inflammation
Nephropathy
Basophilic Focus
Inflammation
Cyst
Adenoma

Pigmentation

Marked
Chronic, Mild
Chronic, Minimal
Multiple, Minimal
Granulomatous, Multiple, Mild
Moderate

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 50

TRT#: 2

SEX: Female

DAY ON TEST: 732

DOSE: VEHICLE CONTROL

DISP: Terminal Sacrifice

HISTO: A84031573

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 | * Lymph Node - Mandibular |
| * Lymph Node - Mesenteric | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Stomach - Forestomach |
| * Stomach - Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|--|----------------|-----------------------------------|-------------------|
| * Adrenal Gland | Cortex | Accessory Adrenal Cortical Nodule | |
| | Medulla | Hyperplasia | Focal, Mild |
| * Clitoral Gland | Duct | Cyst | Moderate |
| * Heart | | Inflammation | Chronic, Mild |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Minimal |
| * Lung | Alveolar Epith | Hyperplasia | Moderate |
| * Mammary Gland | Duct | Adenocarcinoma | |
| | | Cyst | Moderate |
| | | Hyperplasia | Lobular, Mild |
| Note: HYPERPLASIA | TGLs = 1-10 | | |
| Note: ADENOCARC | TGLs = 2-21 | | |
| Note: TGL 2 IS MAMMARY GLAND NOT SKIN. | | | |
| Note: CYST | TGLs = 1-10 | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 3-1] | | | |
| * Spleen | | Pigmentation | Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 51

TRT#: 6

SEX: Female

DAY ON TEST: 730

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031611

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Pancreas	Acinar Cell	Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 52

TRT#: 6

SEX: Female

DAY ON TEST: 730

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031612

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Nose
* Salivary Glands
* Stomach - Glandular
* Uterus

* Adrenal Gland - Medulla
Ear
* Intestine Large - Rectum
* Islets, Pancreatic
* Ovary
* Skin
* Thyroid Gland

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lymph Node - Mandibular
* Pancreas
* Spleen
* Trachea

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mesenteric
* Parathyroid Gland
* Stomach - Forestomach
* Urinary Bladder

MISSING

* Thymus

OBSERVATIONS

* Clitoral Gland
Ear

Duct

Cyst

Marked

Note: EXTERNAL AND MIDDLE EAR SLIDE 43-NOT REMARKABLE

* Heart
* Kidney
* Liver
* Lung
* Mammary Gland

Renal Tubule
Alveolus
Duct

Inflammation
Mineralization
Basophilic Focus
Pigmentation
Cyst

Chronic, Moderate
Minimal
Multiple, Mild
Mild
Mild

Note: CYST TGLs = 1-10

* Pituitary Gland
* Thymus

Pars Distalis

Cyst

Moderate

Note: THYMUS NOT FOUND ON RECUT.

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 53

TRT#: 6

SEX: Female

DAY ON TEST: 141

DOSE: 450 MG/KG

DISP: Dosing Accident

HISTO: A82024950

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Brain
Intestine Large - Cecum
Lymph Node - Mandibular
Ovary
Salivary Glands
Stomach - Glandular
Urinary Bladder

Adrenal Gland - Medulla
Clitoral Gland
Intestine Small - Ileum
Lymph Node - Mesenteric
Pancreas
Skin
Thymus
Uterus

Bone
Esophagus
Islets, Pancreatic
Mammary Gland
Parathyroid Gland
Spleen
Thyroid Gland

Bone Marrow
Heart
Kidney
Nose
Pituitary Gland
Stomach - Forestomach
Trachea

MISSING

Intestine Large - Rectum

AUTO PRECLUDES DIAG.

Intestine Small - Duodenum

Intestine Small - Jejunum

OBSERVATIONS

Intestine Large
Liver

Colon

Parasite Metazoan
Hepatodiaphragmatic Nodule

Mild
Mild

Note: ANOM HEPAT LOB TGLs = 1
Note: HEPATO DIAPH NODULE;TGL 1 IS ON SLIDE (I).

Lung

Congestion
Foreign Body

Moderate
Mild

Note: CONGESTION TGLs = 3-4

Mediastinum

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 54	TRT#: 6	SEX: Female	DAY ON TEST: 731
	DOSE: 450 MG/KG	DISP: Terminal Sacrifice	HISTO: A84031613

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Minimal
* Pancreas	Acinar Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 55

TRT#: 6

DOSE: 450 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 726

HISTO: A84031614

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Blood		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 1-61			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Astrocytoma Malignant	
* Clitoral Gland		Adenoma	
		Inflammation	Suppurative, Marked
Note: CLITORAL GLAND IS ON SLIDE 9.			
Note: INFLAMMATION TGLs = 2-9			
Note: [ADENOMA] TGLs = 2-9			
* Heart		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-5			
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-4			
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Moderate
Note: MAMMARY GLAND IS ON SLIDES 9,15 AND 10			
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:43
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 55	TRT#: 6	SEX: Female	DAY ON TEST: 726
	DOSE: 450 MG/KG	DISP: Moribund	HISTO: A84031614

ORGAN AND ACCOUNTABLE SITE STATUS

Note: ADENOMA TGLs = 8-1			
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-2			
* Stomach	Glandular	Cyst	Multiple, Mild
	Epithelium, Glandular	Hyperplasia	Moderate
	Forestomach	Inflammation	Chronic, Moderate
	Forestomach	Ulcer	Moderate
Note: CYST TGLs = 9-6			
Note: INFLAMMATION TGLs = 10-6			
Note: ULCER TGLs = 10-6			
Note: HYPERPLASIA TGLs = 9-6			
* Thyroid Gland	Follicular Cel	Carcinoma	
Note: CARCINOMA TGLs = 6-3			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 56

TRT#: 6

SEX: Female

DAY ON TEST: 220

DOSE: 450 MG/KG

DISP: Dead

HISTO: A82026015

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Clitoral Gland
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mandibular
- * Ovary
- * Salivary Glands
- * Stomach - Glandular

- * Bone
- * Esophagus
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Lymph Node - Mesenteric
- * Pancreas
- * Skin
- * Thyroid Gland

- * Bone Marrow
- * Heart
- * Intestine Small - Duodenum
- * Kidney
- * Mammary Gland
- * Parathyroid Gland
- * Spleen
- * Urinary Bladder

- * Brain
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Liver
- * Nose
- * Pituitary Gland
- * Stomach - Forestomach
- * Uterus

MISSING

- * Adrenal Gland - Medulla

OBSERVATIONS

* Lung			Congestion	Moderate
		Lymphatic	Foreign Body	Moderate
Note: CONGESTION	TGLs = 2-4,3-4			
* Lymph Node		Pancreatic	Inflammation	Granulomatous, Moderate
* Thymus			Hemorrhage	Moderate
Note: HEMORRHAGE	TGLs = 4-2			
* Trachea			Inflammation	Suppurative, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 57

TRT#: 6

SEX: Female

DAY ON TEST: 653

DOSE: 450 MG/KG

DISP: Dead

HISTO: A83029560

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla
* Clitoral Gland
* Intestine Small - Duodenum
* Nose
* Salivary Glands
* Stomach - Glandular
* Urinary Bladder

* Bone
* Esophagus
* Islets, Pancreatic
* Ovary
* Skin
* Thymus
* Uterus

* Bone Marrow
* Intestine Large - Colon
* Lymph Node - Mandibular
* Pancreas
* Spleen
* Thyroid Gland

* Brain
* Intestine Large - Rectum
* Lymph Node - Mesenteric
* Parathyroid Gland
* Stomach - Forestomach
* Trachea

AUTO PRECLUDES DIAG.

* Intestine Large - Cecum

* Intestine Small - Ileum

* Intestine Small - Jejunum

OBSERVATIONS

* Adrenal Gland
* Heart
* Kidney
* Liver

* Lung
* Mammary Gland

Cortex

Renal Tubule

Bile Duct

Duct

Adenoma
Inflammation
Mineralization
Basophilic Focus
Hyperplasia
Congestion
Cyst
Fibroadenoma

Chronic, Mild
Minimal
Multiple, Minimal
Mild
Mild
Marked

Note: CYST TGLs = 1-8

Note: CYST TGLs = 2

Note: FIBROADENOMA TGLs = 2

Note: TGL 2 IS ON SLIDE (I).

Note: TGL 2 SUBCUTANEOUS TISSUE IS ACTUALLY MAMMARY GLAND.

* Pituitary Gland

Pars Distalis

Adenoma

[Adenoma TGLS = 3-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 58

TRT#: 6

SEX: Female

DAY ON TEST: 596

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83028854

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Esophagus
- * Intestine Small - Duodenum
- * Lymph Node - Mandibular
- * Pancreas
- * Stomach - Forestomach
- * Trachea

- * Adrenal Gland - Medulla
- * Heart
- * Intestine Small - Ileum
- * Lymph Node - Mesenteric
- * Parathyroid Gland
- * Stomach - Glandular
- * Urinary Bladder

- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Jejunum
- * Nose
- * Salivary Glands
- * Thymus
- * Uterus

- * Brain
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Ovary
- * Skin
- * Thyroid Gland

OBSERVATIONS

- * Bone Marrow
- * Clitoral Gland
- * Intestine Large
- * Kidney
- * Liver

- Duct
- Colon
- Renal Tubule

- Myelofibrosis
- Cyst
- Parasite Metazoan
- Pigmentation
- Hyperplasia
- Leukemia Mononuclear
- Leukemia Mononuclear
- Cyst
- Adenoma
- Cyst
- Leukemia Mononuclear

- Moderate
- Moderate
- Mild
- Mild
- Nodular, Mild
- Mild
- Multiple, Mild

[Adenoma TGLS = 3-1]

- * Spleen

[Leukemia Mononuclear TGLS = 2-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 59

TRT#: 6

SEX: Female

DAY ON TEST: 726

DOSE: 450 MG/KG

DISP: Dead

HISTO: A84031615

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|---------------------------|-----------------------------|-----------------------|
| * Adrenal Gland - Cortex | * Adrenal Gland - Medulla | * Bone | * Brain |
| * Esophagus | * Intestine Large - Colon | * Intestine Small - Jejunum | * Islets, Pancreatic |
| * Lymph Node - Mandibular | * Nose | * Ovary | * Pancreas |
| * Salivary Glands | * Skin | * Stomach - Forestomach | * Stomach - Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- | | |
|------------------------------|---------------------|
| * Intestine Small - Duodenum | * Parathyroid Gland |
|------------------------------|---------------------|

AUTO PRECLUDES DIAG.

- | | | | |
|---------------------------|----------------------------|---------------------------|---------------------------|
| * Intestine Large - Cecum | * Intestine Large - Rectum | * Intestine Small - Ileum | * Lymph Node - Mesenteric |
|---------------------------|----------------------------|---------------------------|---------------------------|

OBSERVATIONS

- | | | | |
|---|---------------|----------------------|---------------------|
| * Bone Marrow | | Leukemia Mononuclear | |
| * Clitoral Gland | Duct | Cyst | Marked |
| | | Inflammation | Suppurative, Marked |
| Note: INFLAMMATION TGLs = 2-15 | | | |
| * Heart | | Congestion | Marked |
| | | Inflammation | Chronic, Mild |
| [Inflammation TGLS = 7-2-1] | | | |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Minimal |
| | Bile Duct | Hyperplasia | Mild |
| | | Leukemia Mononuclear | |
| * Lung | | Leukemia Mononuclear | |
| * Mammary Gland | Duct | Cyst | Mild |
| | | Fibroadenoma | |
| Note: SKIN ON SLIDE 21 IS MAMMARY GLAND FIBROADENOMA. | | | |
| Note: FIBROADENOMA TGLs = 1-21 | | | |
| * Parathyroid Gl | | | |
| Note: NO PARATHYROID ON RECUT OF SLIDE 3. | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 59

TRT#: 6

SEX: Female

DAY ON TEST: 726

DOSE: 450 MG/KG

DISP: Dead

HISTO: A84031615

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 6-1]

* Spleen

Fibrosis

Marked

[Fibrosis TGLS = 4-2]

[Leukemia Mononuclear TGLS = 3-2]

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 60

TRT#: 6

SEX: Female

DAY ON TEST: 325

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83027682

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Eye

OBSERVATIONS

* Liver		Clear Cell Focus	Mild
		Hepatodiaphragmatic Nodule	Mild
Note: ANOM HEPAT LOB TGLs = 4			
Note: ANOM HEPAT LOB TGLs = 5			
Note: TGL 5 IS ON SLIDE (II).			
Note: TGL 4 IS ON SLIDE (I)			
* Pituitary Gland	Pars Distalis	Angiectasis	Minimal
Note: ANGIECTASIS TGLs = 7-1			
* Stomach	Forestomach	Edema	Moderate
	Forestomach	Ulcer	Mild
* Uterus		Polyp Stromal	
Note: POLYP STROMAL TGLs = 3-7			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 61

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031616

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Dilatation	Moderate
	Renal Tubule	Infarct	Multiple, Moderate
		Mineralization	Mild
Note: DILATATION	TGLs = 3-7		
Note: INFARCT	TGLs = 3-7		
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
* Pancreas	Acinar Cell	Hyperplasia	Mild
* Parathyroid GI			
Note: PARATHYROID NOT FOUND ON RECUT.			
* Pituitary Gland	Pars Distalis	Inflammation	Granulomatous, Focal, Minimal
* Thyroid Gland	Follicular Cel	Carcinoma	
Note: CARCINOMA	TGLs = 4-3		
* Uterus		Adenoma	
		Polyp Stromal	Multiple
Note: POLYP STROMAL	TGLs = 1-9		
Note: [ADENOMA]	TGLs = 2-9		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 61

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031616

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:43

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 62

TRT#: 6

SEX: Female

DAY ON TEST: 687

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A84031617

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Brain	* Esophagus
* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum
* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Gland	Cortex	Hypertrophy	Focal, Mild
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Atrophy	Mild
* Heart	Atrium	Congestion	Marked
		Fibrosis	Multiple, Moderate
Note: CONGESTION TGLs = 8-2			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
	Renal Tubule	Pigmentation	Moderate
* Liver		Eosinophilic Focus	Moderate
		Hepatodiaphragmatic Nodule	Moderate
	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Moderate
		Leukemia Mononuclear	
Note: EOSIN FOCUS TGLs = 4			
Note: ANOM HEPAT LOB TGLs = 4			
Note: HYPERPLASIA TGLs = 3-5			
Note: LEUKEMIA MONUC TGLs = 3-5			
* Lung		Leukemia Mononuclear	
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-8			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 62

TRT#: 6

SEX: Female

DAY ON TEST: 687

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A84031617

ORGAN AND ACCOUNTABLE SITE STATUS

* Mammary Gland

Duct

Cyst

Moderate

* Pituitary Gland

Pars Distalis

Cyst

Multiple, Mild

* Spleen

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 1-2-1

* Uterus

Endometrium

Hyperplasia

Cystic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 63

TRT#: 6

SEX: Female

DAY ON TEST: 670

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83029713

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Pancreas
- * Stomach - Forestomach
- * Trachea

- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Mammary Gland
- * Parathyroid Gland
- * Stomach - Glandular
- * Urinary Bladder

- * Bone
- * Heart
- * Intestine Small - Duodenum
- * Lung
- * Nose
- * Salivary Glands
- * Thymus

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Ovary
- * Skin
- * Thyroid Gland

OBSERVATIONS

- * Clitoral Gland

Carcinoma
 Inflammation
 Metaplasia

Suppurative, Marked
 Squamous, Moderate

Note: TGL 1 IS ON SLIDE (I) AND IS CLITORAL GLAND NOT SKIN.

Note: CARCINOMA TGLs = 1

Note: INFLAMMATION TGLs = 1

- * Kidney Renal Tubule

Mineralization
 Nephropathy
 Basophilic Focus
 Inflammation
 Hyperplasia
 Hematopoietic Cell Proliferation
 Hyperplasia

Minimal
 Chronic, Minimal
 Multiple, Mild
 Granulomatous, Multiple, Mild
 Focal, Mild
 Moderate
 Squamous, Moderate

- * Pituitary Gland Pars Distalis

- * Spleen

Tongue

Note: [HYPERPLASIA] TGLs = 2

Note: TGL 2 IS ON SLIDE (II).

- * Uterus

Polyp Stromal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 64

TRT#: 6

SEX: Female

DAY ON TEST: 669

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83029714

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	Tissue NOS	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Clitoral Gland

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Basophilic Focus Leukemia Mononuclear	Mild Chronic, Mild Multiple, Mild
* Liver		Atrophy	Moderate
* Pancreas	Acinar Cell	Squamous Cell Carcinoma	Multiple
* Skin	Subcut Tiss		
Note: SQUAM CEL CARC TGLs = 1			
Note: TGL 1 - IS ON SLIDE (I). TUMOR MAY HAVE ARISEN FROM CLITORAL			
Note: GLAND SINCE GLAND NOT FOUND. NORMAL TISSUE NOT FOUND.			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 65

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031618

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Esophagus
* Intestine Small - Ileum
* Lung
* Ovary
* Salivary Glands
* Stomach - Glandular
* Urinary Bladder

* Adrenal Gland - Medulla
* Intestine Large - Cecum
* Intestine Small - Jejunum
* Lymph Node - Mandibular
* Pancreas
* Skin
* Thymus

* Bone
* Intestine Large - Colon
* Islets, Pancreatic
* Lymph Node - Mesenteric
* Parathyroid Gland
* Spleen
* Thyroid Gland

* Brain
* Intestine Small - Duodenum
* Kidney
* Nose
* Pituitary Gland
* Stomach - Forestomach
* Trachea

MISSING

* Intestine Large - Rectum

OBSERVATIONS

* Bone Marrow
* Clitoral Gland

Duct

Note: ADENOMA TGLs = 2-15

* Heart
* Liver

* Mammary Gland

Note: FIBROADENOMA TGLs = 1-21

* Skin

Note: SLIDE 21 IS MAMMARY GLAND FIBROADENOMA.

* Uterus

Endometrium

Note: POLYP STROMAL TGLs = 3-22

Hyperplasia
Adenoma
Cyst

Inflammation
Basophilic Focus
Inflammation
Fibroadenoma

Hyperplasia
Polyp Stromal

Reticulum Cell, Moderate

Moderate

Chronic, Moderate

Multiple, Mild

Granulomatous, Multiple, Mild

Cystic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 66

TRT#: 6

DOSE: 450 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 452

HISTO: A83027863

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone Marrow	* Brain
* Clitoral Gland	Ear	* 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	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone	Femur	Fracture	Marked
Note: FRACTURE TGLs = 1,2			
Note: (I) MASS APPEARED TO ARISE IN SUBCUTIS AND INVADED			
Note: SURROUNDING TISSUE; TGL 1&2 ARE ON SLIDE (I)			
* Kidney	Renal Tubule	Nephropathy Pigmentation	Chronic, Minimal Mild
* Liver		Basophilic Focus Hematopoietic Cell Proliferation	Multiple, Minimal Mild
* Pancreas	Acinar Cell	Hyperplasia	Moderate
Skeletal Muscle	Hindlimb	Hemangiosarcoma	Extension
Note: TGL 1 IS ON SLIDE I			
Note: HEMANGIOSARC TGLs = 1			
* Skin	Subcut Tiss	Hemangiosarcoma	
Note: TGL 1 IS ON SLIDE I			
Note: HEMANGIOSARC TGLs = 1			
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 3-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 67

TRT#: 6

DOSE: 450 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 596

HISTO: A83028855

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Bone	* Brain	* Esophagus
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Lymph Node - Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Stomach - Forestomach	* Thymus
* Thyroid Gland	* Uterus	Vagina	

MISSING

* Clitoral Gland

OBSERVATIONS

* Adrenal Gland	Medulla	Leukemia Mononuclear	
Blood		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Cecum	Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
	Renal Tubule	Mineralization	Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Leukemia Mononuclear	
* Lung	Bronchus	Foreign Body	Mild
		Leukemia Mononuclear	
* Lymph Node	Axillary	Leukemia Mononuclear	
	Bronchial	Leukemia Mononuclear	
	Inguinal	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	

Note: TGL 5 IS ON SLIDE (V) AND IS AXILLARY L.N.

Note: TGL 2 IS ON SLIDE (II)

Note: TGL 3 IS ON SLIDE (III)-TGL 3 IS INGUINAL LN.

Note: TGL 2-SKIN IS INGUINAL LYMPH NODE

Note: LEUKEMIA MONUC TGLs = 5

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 67	TRT#: 6	SEX: Female	DAY ON TEST: 596
	DOSE: 450 MG/KG	DISP: Moribund	HISTO: A83028855

ORGAN AND ACCOUNTABLE SITE STATUS

Note: LEUKEMIA MONUC TGLs = 2,3		
* Skin	Subcut Tiss	Leukemia Mononuclear
Note: TGL 1 IS ON SLIDE (I)		
Note: LEUKEMIA MONUC TGLs = 1		
* Spleen		Leukemia Mononuclear
Note: SLIDES IV&VI ARE SPLEEN		
Note: TGL 4 IS ON SLIDE (IV);TGL 6 IS ON SLIDE (VI)		
Note: LEUKEMIA MONUC TGLs = 4,6,7-2		
* Stomach	Glandular	Leukemia Mononuclear
* Trachea		Leukemia Mononuclear
* Urinary Bladder		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 68

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031619

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Trachea		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-10			
* Pancreas	Acinar Cell	Atrophy	Mild
	Acinar Cell	Hyperplasia	Mild
* Parathyroid Gland			
Note: NOT FOUND ON RECUT.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild
* Uterus	Endometrium	Hyperplasia	Cystic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 69

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031620

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large - Cecum
* 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	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney	Renal Tubule	Mineralization	Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-5			
* Lung		Alveolar/Bronchiolar Adenoma	
		Leukemia Mononuclear	
* Pancreas	Duct	Cyst	Marked
Note: CYST TGLs = 2-21			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLs = 3-2]			
* Uterus	Endometrium	Hyperplasia	Cystic, Moderate
		Polyp Stromal	
Note: POLYP STROMAL TGLs = 1-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 70

TRT#: 6

SEX: Female

DAY ON TEST: 670

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83029715

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Stomach - Forestomach	* Stomach - Glandular	* Thyroid Gland
Tissue NOS	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Inflammation	Chronic, Mild
* Kidney		Leukemia Mononuclear	
	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Moderate
		Leukemia Mononuclear	
Note: TGL = 3, NO CORRESPONDING LESION			
* Lung		Leukemia Mononuclear	
* Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
* Ovary		Cyst	Mild
* Pancreas	Acinar Cell	Atrophy	Mild
* Skin	Subcut Tiss	Fibrosarcoma	
	Subcut Tiss	Leukemia Mononuclear	
Note: [FIBROSARC] TGLs = 1			
Note: TGL 1 IS ON SLIDE (I)			
Note: LEUKEMIA MONUC TGLs = 1			
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2			
* Thymus	Fat, Mediastinum	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 71

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031621

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* 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	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Clitoral Gland

OBSERVATIONS

* Adrenal Gland	Cortex Cortex	Degeneration Hypertrophy	Cystic, Minimal Focal, Mild
* Clitoral GI			
Note: CLITORAL GLAND- NOT ON SLIDE 15 ONLY MAMMARY GLAND.			
* Heart		Inflammation	Chronic, Mild
* Intestine Small	Ileum	Hyperplasia	Lymphoid, Moderate
* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Minimal
* Liver		Basophilic Focus Inflammation	Multiple, Mild Granulomatous, Multiple, Mild
* Lung	Alveolus	Pigmentation	Mild
* Mammary Gland	Duct	Cyst Hyperplasia	Mild Lobular, Mild
Note: CYST TGLs = 1-15			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-1]			
* Stomach	Glandular	Mineralization	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 72

TRT#: 6

SEX: Female

DAY ON TEST: 584

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83028757

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Clitoral Gland
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Nose
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Small - Duodenum
- * Lung
- * Ovary
- * Skin
- * Thymus
- * Uterus

- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Pancreas
- * Spleen
- * Thyroid Gland

- * Bone Marrow
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Parathyroid Gland
- * Stomach - Forestomach
- * Trachea

OBSERVATIONS

- * Brain
- * Heart
- * Kidney
- * Liver

- Compression
- Inflammation
- Nephropathy
- Basophilic Focus
- Hepatodiaphragmatic Nodule

- Marked
- Chronic, Mild
- Chronic, Moderate
- Multiple, Mild
- Moderate

Note: TGL 1 IS ON SLIDE (I)

Note: ANOM HEPAT LOB TGLs = 1

- * Mammary Gland

Duct

Cyst

Mild

Note: CYST TGLs = 3-8

- * Pituitary Gland

Pars Distalis
Pars Distalis

Adenoma
Cyst

Multiple, Minimal

[Adenoma TGLS = 2-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 73

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031622

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Ovary
- * Salivary Glands
- * Trachea

- * Adrenal Gland - Medulla
- * Clitoral Gland
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Pancreas
- * Skin
- * Urinary Bladder

- * Bone
- * Esophagus
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Mammary Gland
- * Parathyroid Gland
- * Spleen

- * Bone Marrow
- * Heart
- * Intestine Small - Duodenum
- * Lung
- * Nose
- * Pituitary Gland
- * Stomach - Forestomach

OBSERVATIONS

- | | | | |
|----------------------------------|-------------|------------------|------------------|
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Basophilic Focus | Multiple, Mild |
| * Stomach | Glandular | Mineralization | Moderate |
| * Thymus | | Cyst | Multiple, Mild |
| * Thyroid Gland | C Cell | Carcinoma | |
| | C Cell | Hyperplasia | Mild |
| Note: [HYPERPLASIA] TGLs = 1-3 | | | |
| * Uterus | Endometrium | Hyperplasia | Glandular, Mild |

PRIMARY CAUSE OF DEATH

-

Animal Note: SLIDE 21- MASS IS ACCUMULATION OF PLANT FIBERS.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 74

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031623

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Brain	* Clitoral Gland	Ear
* Esophagus	Eye	* Intestine Large - Cecum	* Intestine Large - Rectum
* Intestine Small - Duodenum	* Islets, Pancreatic	* Nose	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Stomach - Forestomach	* Stomach - Glandular
* Trachea			

OBSERVATIONS

* Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-8		
Blood		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 1-61		
* Bone	Calvarium	Hyperostosis	Mild
Note: HYPEROSTOSIS	TGLs = 19-28		
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large	Colon	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 12-24		
* Intestine Small	Ileum	Leukemia Mononuclear	
	Jejunum	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 13-5		
Note: LEUKEMIA MONUC	TGLs = 11-5,11-23		
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 16-5		
* Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 17-4		
* Lymph Node	Axillary	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Inguinal	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 74

TRT#: 6

DOSE: 450 MG/KG

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO: A84031623

ORGAN AND ACCOUNTABLE SITE STATUS

Mediastinal	Leukemia Mononuclear
Mesenteric	Leukemia Mononuclear
Pancreatic	Leukemia Mononuclear
Renal	Leukemia Mononuclear

Note: TGL 3 IS ON SLIDE 21 AND IS AXILLARY LN AND NOT SKIN

Note: LEUKEMIA MONUC TGLs = 7-22

Note: LEUKEMIA MONUC TGLs = 15-26

Note: LEUKEMIA MONUC TGLs = 10-8

Note: LEUKEMIA MONUC TGLs = 3-21

Note: LEUKEMIA MONUC TGLs = 14-25

[Leukemia Mononuclear TGLS = 2-2]

* Mammary Gland		Leukemia Mononuclear
Mesentery		Leukemia Mononuclear
* Ovary		Leukemia Mononuclear
* Pancreas		Leukemia Mononuclear
* Skin	Subcut Tiss	Leukemia Mononuclear
* Spleen		Leukemia Mononuclear
		[Leukemia Mononuclear TGLS = 5-2,6-2]
* Thymus		Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 18-27	
* Thyroid Gland	C Cell	Adenoma
* Urinary Bladder		Leukemia Mononuclear
* Uterus		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 75

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031624

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Kidney	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart	Inflammation	Chronic, Mild
* Islets, Pancreatic Note: CARCINOMA TGLs = 2-5	Carcinoma	
* Liver	Basophilic Focus	Multiple, Mild
* Uterus Note: POLYP STROMAL TGLs = 1-9	Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 76

TRT#: 6

SEX: Female

DAY ON TEST: 221

DOSE: 450 MG/KG

DISP: Dead

HISTO: A82026016

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|---------------------|------------------------------|-----------------------------|
| * Bone | * Bone Marrow | * Brain | * Clitoral Gland |
| * Esophagus | * Heart | * Intestine Small - Duodenum | * Intestine Small - Jejunum |
| * Islets, Pancreatic | * Kidney | * Liver | * Lymph Node - Mandibular |
| * Lymph Node - Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach - Glandular | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

AUTO PRECLUDES DIAG.

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

OBSERVATIONS

- | | | | |
|-----------------------------|-------------|-------------------|----------------|
| * Adrenal Gland | Cortex | Congestion | Mild |
| | Medulla | Congestion | Mild |
| Note: TGL 1 IS ON SLIDE 6B. | | | |
| Note: CONGESTION TGLs = 1 | | | |
| * Intestine Large | Colon | Parasite Metazoan | Mild |
| * Lung | | Congestion | Moderate |
| | Mediastinum | Foreign Body | Moderate |
| | Mediastinum | Hemorrhage | Moderate |
| * Stomach | Forestomach | Edema | Moderate |
| | Forestomach | Ulcer | Multiple, Mild |
| * Thymus | Mediastinum | Hemorrhage | Marked |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 77	TRT#: 6	SEX: Female	DAY ON TEST: 599
	DOSE: 450 MG/KG	DISP: Dead	HISTO: A83028856

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	Blood	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Small - Duodenum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

AUTO PRECLUDES DIAG.

* Intestine Large - Rectum	* Intestine Small - Ileum
----------------------------	---------------------------

OBSERVATIONS

* Heart		Inflammation	Chronic, Moderate
* Kidney	Renal Tubule	Mineralization	Mild
* Skin	Subcut Tiss	Sarcoma	
Note: SARCOMA TGLs = 1			
Note: TGL 1 IS ON SLIDE (I).			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach	Forestomach	Ulcer	Multiple, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 78

TRT#: 6

SEX: Female

DAY ON TEST: 668

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83029716

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Clitoral Gland	Duct	Cyst	Marked
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Mammary Gland		Adenoma	
	Duct	Cyst	Marked
		Fibroadenoma	

Note: TGL 2 IS ON SLIDE (II).

Note: TGL 1 IS ON SLIDE (I).

Note: CYST TGLs = 1

Note: SLIDES I AND II-SUBCUTANEOUS TISSUE IS MAMMARY GLAND.

[Fibroadenoma TGLS = 2]

* Pituitary Gland

Pars Distalis

Adenoma

[Adenoma TGLS = 3-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 79

TRT#: 6

SEX: Female

DAY ON TEST: 578

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83028668

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* 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	* Lung	* Lymph Node - Mandibular
* Lymph Node - Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	Vagina

OBSERVATIONS

* Clitoral Gland Note: FIBROSIS TGLs = 2		Fibrosis	Moderate
* Heart		Inflammation	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland Note: FIBROADENOMA TGLs = 1 Note: SUBCUTIS		Fibroadenoma	
* Pituitary Gland	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 80

TRT#: 6

SEX: Female

DAY ON TEST: 677

DOSE: 450 MG/KG

DISP: Dead

HISTO: A83029847

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|------------------------------|---------------------------|-----------------------------|
| * Adrenal Gland - Medulla | * Bone | * Bone Marrow | * Brain |
| * Clitoral Gland | * Esophagus | * Intestine Large - Cecum | * Intestine Large - Colon |
| * Intestine Large - Rectum | * Intestine Small - Duodenum | * Intestine Small - Ileum | * Intestine Small - Jejunum |
| * Islets, Pancreatic | * Kidney | * Lymph Node - Mandibular | * Lymph Node - Mesenteric |
| * Nose | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Stomach - Forestomach | * Stomach - Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|--|---------------|---------------------------|----------------|
| * Adrenal Gland | Cortex | Vacuolization Cytoplasmic | Moderate |
| Eye | Retina | Cataract | Moderate |
| | | Degeneration | Moderate |
| Note: CATARACT TGLs = 1 | | | |
| Note: DEGEN TGLs = 2 | | | |
| Note: EYE SLIDE HAS ONLY LENS & RETINAL FRAGMENT | | | |
| Note: TGL 1 AND 2 ARE ON SLIDE "J" | | | |
| * Heart | | Inflammation | Chronic, Mild |
| * Liver | | Basophilic Focus | Multiple, Mild |
| | Bile Duct | Hyperplasia | Mild |
| * Lung | | Congestion | Moderate |
| Note: CONGESTION TGLs = 5-4 | | | |
| * Mammary Gland | Duct | Cyst | Moderate |
| Note: CYST TGLs = 3-8 | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 7-1] | | | |
| * Spleen | | Pigmentation | Moderate |
| * Trachea | | | |
| Note: TRACHAEL OBSTRUCTION NOT FOUND. | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 81

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031625

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon
* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node - Mandibular	* Lymph Node - Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach - Forestomach	* Stomach - Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Thymus

OBSERVATIONS

* Adrenal Gland	Cortex	Hypertrophy	Focal, Mild
* Heart		Inflammation	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-5 [Leukemia Mononuclear TGLS = 3-5]			
* Lung		Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Mild
* Pituitary Gland	Pars Distalis	Cyst	Minimal
* Spleen		Leukemia Mononuclear	
* Thymus			
Note: THYMUS NOT FOUND ON RECUT.			
* Uterus		Dilatation	Mild
		Polyp Stromal	
Note: DILATATION TGLs = 1-9 Note: POLYP STROMAL TGLs = 2-9			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 82

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031626

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Medulla
- * 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

- * Bone Marrow
- * Heart
- * Intestine Small - Duodenum
- * Lung
- * Nose
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Brain
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Ovary
- * Skin
- * Thymus

OBSERVATIONS

- * Adrenal Gland
- * Kidney
- * Liver

Cortex

- Adenoma
- Nephropathy
- Basophilic Focus
- Inflammation
- Atrophy
- Dilatation
- Hyperplasia
- Polyp Stromal

- Chronic, Minimal
- Multiple, Mild
- Granulomatous, Multiple, Mild
- Mild
- Moderate
- Cystic, Mild

- * Pancreas
- * Uterus

Acinar Cell

Endometrium

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 83

TRT#: 6

SEX: Female

DAY ON TEST: 569

DOSE: 450 MG/KG

DISP: Dosing Accident

HISTO: A83028669

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Brain
Lymph Node - Mandibular
Pancreas
Spleen
Trachea

Adrenal Gland - Medulla
Esophagus
Lymph Node - Mesenteric
Parathyroid Gland
Stomach - Forestomach
Urinary Bladder

Bone
Intestine Small - Duodenum
Nose
Salivary Glands
Stomach - Glandular
Uterus

Bone Marrow
Islets, Pancreatic
Ovary
Skin
Thyroid Gland
Vagina

MISSING

Clitoral Gland

Thymus

AUTO PRECLUDES DIAG.

Intestine Large - Cecum
Intestine Small - Jejunum

Intestine Large - Colon
Kidney

Intestine Large - Rectum
Pituitary Gland

Intestine Small - Ileum

OBSERVATIONS

Heart
Liver
Lung
Mammary Gland

Duct

Inflammation
Basophilic Focus
Congestion
Cyst

Chronic, Mild
Multiple, Mild
Moderate
Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 84

TRT#: 6

SEX: Female

DAY ON TEST: 148

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A82024968

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Cecum
* Intestine Small - Jejunum
* Lymph Node - Mandibular
* Ovary
* Skin
* Trachea

* Adrenal Gland - Medulla
* Clitoral Gland
* Intestine Large - Colon
* Islets, Pancreatic
* Lymph Node - Mesenteric
* Pancreas
* Stomach - Glandular
* Urinary Bladder

* Bone
* Esophagus
* Intestine Small - Duodenum
* Kidney
* Mammary Gland
* Parathyroid Gland
* Thymus
* Uterus

* Bone Marrow
* Heart
* Intestine Small - Ileum
* Liver
* Nose
* Salivary Glands
* Thyroid Gland

PRESENT BUT NOT EXAMINED

* Intestine Large - Rectum

OBSERVATIONS

* Lung	Mediastinum	Edema	Moderate
	Mediastinum	Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Mild
* Spleen		Atrophy	Mild
		Pigmentation	Mild
Note: ATROPHY	TGLs = 1-2		
* Stomach	Forestomach	Ulcer	Mild

PRIMARY CAUSE OF DEATH

-

Animal Note: TGL 3 & 4 NOT OBSERVED ON SLIDE I. RECUTS ALSO NEGATIVE.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 85

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031627

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Lung	Peribronchial	Infiltration Cellular	Lymphocyte, Mild
* Pancreas	Acinar Cell	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-1]		
* Stomach	Glandular	Mineralization	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 86

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031628

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Nose
- * Skin
- * Thymus
- * Uterus

- * Bone
- * Heart
- * Intestine Small - Duodenum
- * Lung
- * Ovary
- * Spleen
- * Thyroid Gland

- * Bone Marrow
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Parathyroid Gland
- * Stomach - Forestomach
- * Trachea

OBSERVATIONS

- * Clitoral Gland

Duct

Adenoma
Cyst

Marked

Note: CYST TGLs = 1-21
Note: [ADENOMA] TGLs = 1-21

- * Kidney
- * Liver
- * Mammary Gland
- * Pancreas
- * Pituitary Gland

Renal Tubule

Duct
Acinar Cell
Pars Distalis

Mineralization
Basophilic Focus
Cyst
Hyperplasia
Adenoma

Minimal
Multiple, Mild
Mild
Multiple, Mild

[Adenoma TGLS = 2-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 87

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031629

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Gland - Cortex
- * Brain
- * Intestine Large - Rectum
- * Islets, Pancreatic
- * Nose
- * Salivary Glands
- * Stomach - Glandular
- * Urinary Bladder

- * Adrenal Gland - Medulla
- * Esophagus
- * Intestine Small - Duodenum
- * Lung
- * Ovary
- * Skin
- * Thymus

- * Bone
- * Intestine Large - Cecum
- * Intestine Small - Ileum
- * Lymph Node - Mandibular
- * Pancreas
- * Spleen
- * Thyroid Gland

- * Bone Marrow
- * Intestine Large - Colon
- * Intestine Small - Jejunum
- * Lymph Node - Mesenteric
- * Parathyroid Gland
- * Stomach - Forestomach
- * Trachea

OBSERVATIONS

- * Clitoral Gland

Note: ADENOMA TGLs = 1-15

- * Heart
- * Kidney
- * Liver

Note: CLEAR CL FOCUS TGLs = 3-22

- * Mammary Gland
- * Pituitary Gland

Note: HYPERPLASIA TGLs = 4-1

Note: CYST TGLs = 4-1

- * Uterus

Note: POLYP STROMAL TGLs = 2-21

Duct

Renal Tubule

Pars Distalis
Pars Distalis

Adenoma
Cyst

Inflammation
Mineralization
Basophilic Focus
Clear Cell Focus

Hyperplasia
Cyst
Hyperplasia

Polyp Stromal

Moderate

Chronic, Mild
Minimal
Multiple, Mild
Moderate

Lobular, Mild
Mild
Focal, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 88

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031630

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* 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	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Gland	Cortex	Degeneration	Cystic, Moderate
	Cortex	Vacuolization Cytoplasmic	Mild
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Mammary Gland	Duct	Cyst	
Note: CYST TGLs = 1-10			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Mild
[Adenoma TGLS = 5-1]			
* Uterus		Decidual Reaction	Moderate
		Hemangiosarcoma	
	Endometrium	Hyperplasia	Cystic, Moderate
		Polyp Stromal	
Note: HEMANGIOSARC TGLs = 4-22			
Note: [DECIDUAL REACT] TGLs = 3-21			
Note: POLYP STROMAL TGLs = 4-22			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 89

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031631

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|------------------------------|---------------------------|-----------------------------|----------------------------|
| * Bone | * Bone Marrow | * Brain | * Esophagus |
| * Heart | * Intestine Large - Cecum | * Intestine Large - Colon | * Intestine Large - Rectum |
| * Intestine Small - Duodenum | * Intestine Small - Ileum | * Intestine Small - Jejunum | * Islets, Pancreatic |
| * Lung | * Lymph Node - Mandibular | * 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 Gland | Cortex
Medulla | Accessory Adrenal Cortical Nodule
Pheochromocytoma Benign | |
| * Clitoral Gland | Duct | Cyst | Mild |
| Note: CYST TGLs = 1-15 | | | |
| * Kidney | | Nephropathy | Chronic, Minimal |
| * Liver | | Hepatodiaphragmatic Nodule
Mixed Cell Focus | Mild
Mild |
| Note: ANOM HEPAT LOB TGLs = 4-23 | | | |
| * Mammary Gland | Duct | Cyst
Fibroadenoma | Moderate
Multiple |
| Note: FIBROADENOMA TGLs = 2-21,3-22 | | | |
| Note: TGL 2&3 ON SLIDES 21&22 ARE MAMMARY GLAND NOT SKIN. | | | |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Focal, Moderate |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 90

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031632

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* 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
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Gland	Medulla	Angiectasis	Marked
	Medulla	Pheochromocytoma Benign	
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney		Nephropathy	Chronic, Mild
* Liver		Mixed Cell Focus	Mild
* Mammary Gland		Hyperplasia	Lobular, Mild
Note: HYPERPLASIA TGLs = 2-10			
Mesentery	Fat	Necrosis	Focal, Moderate
Note: NECROSIS TGLs = 1-21			
* Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 91

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031633

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	Ear	* 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
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach - Forestomach	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

Ear			
Note: EXTERNAL AND MIDDLE EAR SLIDE 43 NOT REMARKABLE.			
Eye		Cataract	Moderate
	Retina	Degeneration	Moderate
Note: DEGEN	TGLs = 1-44		
Note: CATARACT	TGLs = 1-44		
* Heart		Inflammation	Chronic, Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST	TGLs = 2-10		
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Moderate
* Stomach	Glandular	Mineralization	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 92

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031634

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Clitoral Gland
* Intestine Large - Rectum
* Islets, Pancreatic
* Lymph Node - Mesenteric
* Pancreas
* Skin
* Thymus

* Bone
* Esophagus
* Intestine Small - Duodenum
* Kidney
* Mammary Gland
* Parathyroid Gland
* Spleen
* Thyroid Gland

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lung
* Nose
* Pituitary Gland
* Stomach - Forestomach
* Trachea

* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Lymph Node - Mandibular
* Ovary
* Salivary Glands
* Stomach - Glandular
* Urinary Bladder

OBSERVATIONS

* Adrenal Gland
* Heart
* Liver

Medulla

Pheochromocytoma Benign
Inflammation
Basophilic Focus
Mixed Cell Focus
Hyperplasia
Polyp Stromal

Chronic, Mild
Multiple, Mild
Minimal
Glandular, Moderate

* Uterus

Endometrium

Note: POLYP STROMAL TGLs = 2-9

Note: HYPERPLASIA TGLs = 2-9

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 93

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031635

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large - Cecum	* Intestine Large - Rectum
* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach - Forestomach	* Stomach - Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Bone Note: HYPEROSTOSIS TGLs = 2-43	Calvarium	Hyperostosis	Moderate
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Colon	Parasite Metazoan	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Granulomatous, Multiple, Mild
* Lung Note: ALV BRON ADEN TGLs = 1-4		Alveolar/Bronchiolar Adenoma	
* Mammary Gland	Duct	Cyst	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 94

TRT#: 6

SEX: Female

DAY ON TEST: 574

DOSE: 450 MG/KG

DISP: Moribund

HISTO: A83028593

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	Ear	* 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 - Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
Tooth	* Trachea	* Urinary Bladder	* Uterus
Vagina			

OBSERVATIONS

* Liver		Basophilic Focus Vacuolization Cytoplasmic Carcinoma	Multiple, Minimal Mild Metastatic (Uncertain Primary Site)
* Lung			
Note: PRIMARY-SITE IS ZYMBALS GLAND			
* Lymph Node	Mandibular	Carcinoma	Metastatic (Uncertain Primary Site)
Note: [CARCINOMA] TGLs = 2			
Note: PRIMARY-SITE IS ZYMBALS GLAND			
* Salivary Glands		Carcinoma	Metastatic (Uncertain Primary Site)
Note: PRIMARY-SITE IS ZYMBALS GLAND			
Note: [CARCINOMA] TGLs = 2			
* Skin	Subcut Tiss	Carcinoma	Metastatic (Uncertain Primary Site)
Note: [CARCINOMA] TGLs = 2,3			
Note: PRIMARY-SITE IS ZYMBALS GLAND			
Note: TGL 3 IS ON SLIDE MARKED "HEAD"			
* Spleen		Pigmentation	Moderate
Zymbal's Gland		Carcinoma	

PRIMARY CAUSE OF DEATH

-

Animal Note: TGL 2 IS ON SLIDE (I)

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 95

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031636

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large - Cecum
* Intestine Large - Colon	* Intestine Large - Rectum	* Intestine Small - Duodenum	* Intestine Small - Ileum
* Intestine Small - Jejunum	* Islets, Pancreatic	* Kidney	* Liver
* Lung	* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach - Forestomach	* Stomach - Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart		Inflammation	Chronic, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-10			
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Hyperplasia	Focal, Moderate
Note: [HYPERPLASIA] TGLs = 4-1			
[Angiectasis TGLs = 4-1]			
* Thymus		Cyst	Multiple, Mild
* Uterus	Endometrium	Hyperplasia	Cystic, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 96

TRT#: 6

SEX: Female

DAY ON TEST: 732

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031637

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex
* Brain
* Intestine Large - Colon
* Intestine Small - Jejunum
* Lymph Node - Mesenteric
* Skin
* Thymus

* Adrenal Gland - Medulla
* Clitoral Gland
* Intestine Large - Rectum
* Islets, Pancreatic
* Ovary
* Spleen
* Trachea

* Bone
* Esophagus
* Intestine Small - Duodenum
* Lung
* Parathyroid Gland
* Stomach - Forestomach
* Urinary Bladder

* Bone Marrow
* Intestine Large - Cecum
* Intestine Small - Ileum
* Lymph Node - Mandibular
* Salivary Glands
* Stomach - Glandular
* Uterus

MISSING

* Pituitary Gland

OBSERVATIONS

* Heart
* Kidney
* Liver
* Mammary Gland
* Nose
* Pancreas
* Pituitary Gl

Duct
Nasolacrim Dct
Acinar Cell

Inflammation
Nephropathy
Basophilic Focus
Cyst
Inflammation
Atrophy

Chronic, Mild
Chronic, Minimal
Multiple, Mild
Mild
Suppurative, Mild
Mild

Note: LOST DURING PROCESSING.

* Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 97	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 450 MG/KG	DISP: Terminal Sacrifice	HISTO: A84031638

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Gland	Cortex	Hypertrophy	Focal, Mild
* Clitoral Gland		Adenoma	
Note: ADENOMA TGLs = 2-15			
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-5			
Mesentery	Fat	Necrosis	Focal, Mild
Note: NECROSIS TGLs = 3-22			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 98

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031639

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Heart	* Intestine Large - Cecum	* Intestine Large - Colon	* Intestine Large - Rectum
* Intestine Small - Duodenum	* Intestine Small - Ileum	* Intestine Small - Jejunum	* Islets, Pancreatic
* Lymph Node - Mandibular	* Lymph Node - Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach - Forestomach
* Stomach - Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
	Cortex	Hypertrophy	Focal, Mild
* Clitoral Gland	Duct	Cyst	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Bile Duct	Hyperplasia	Minimal
* Lung	Alveolar Epith	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 99

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031640

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Cortex	* Adrenal Gland - Medulla	* Bone	* Brain
* Esophagus	* Intestine Large - Cecum	* Intestine Large - Colon	* 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	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Moderate
* Clitoral Gland	Duct	Cyst	Moderate
* Heart		Inflammation	Chronic, Mild
* Intestine Large	Rectum	Parasite Metazoan	Mild
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Moderate
		Inflammation	Granulomatous, Multiple, Mild
		Mixed Cell Focus	Mild
Note: ANOM HEPAT LOB TGLs = 4-22			
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 1-10			
* Ovary		Cyst	Moderate
		Hyperplasia	Tubular, Mild
Note: CYST TGLs = 2-9			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Cyst	Multiple, Moderate
[Adenoma TGLS = 5-1]			
[Angiectasis TGLS = 5-1]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 100

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 450 MG/KG

DISP: Terminal Sacrifice

HISTO: A84031641

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Gland - Medulla	* 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	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach - Forestomach	* Stomach - Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Gland	Cortex	Hypertrophy	Focal, Moderate
* Clitoral Gland	Duct	Cyst	Marked
* Heart		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Angiectasis	Moderate
		Fibrosis	Focal, Moderate
		Inflammation	Granulomatous, Multiple, Moderate
[Fibrosis TGLS = 4-22]			
* Lymph Node	Mandibular	Hyperplasia	Lymphoid, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-10			
Mesentery	Fat	Inflammation	Granulomatous, Focal, Moderate
Note: INFLAMMATION TGLs = 3-21			
* Ovary		Cyst	Moderate
Note: CYST TGLs = 2-9			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Mild
[Adenoma TGLS = 5-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 101	TRT#: 4	SEX: Female	DAY ON TEST: 731
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033078

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Skin * Spleen

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	
		Inflammation	Granulomatous, Multiple, Mild
[Inflammation TGLs = 4-23]			
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-21			
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
Note: HYPERPLASIA TGLs = 5-1			
Uterus		Polyp Stromal	
Note: POLYP STROMAL TGLs = 3-22			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 102	TRT#: 4	SEX: Female	DAY ON TEST: 731
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A84033079

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Lung	* Mammary Gland	* Spleen
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OBSERVATIONS

Bone Note: HYPEROSTOSIS TGLs = 4-21	Calvarium	Hyperostosis	Moderate
Heart Note: FIBROSIS TGLs = 1-5-1		Fibrosis	Focal, Moderate
* Liver		Basophilic Focus	Multiple, Mild
Pituitary Gland Note: ADENOMA TGLs = 3-1	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 103

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86037987

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Bile Duct

Basophilic Focus

Multiple, Mild

Hyperplasia

Minimal

Inflammation

Granulomatous, Multiple, Mild

* Mammary Gland

Duct

Cyst

Moderate

Fibroadenoma

Multiple

Note: CYST TGLs = 4-21,4-22,4-23

Note: FIBROADENOMA TGLs = 1-21,2-22,3-23

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 104

TRT#: 4

SEX: Female

DAY ON TEST: 641

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029449

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	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	Lung	Nose	Ovary
Pancreas	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Trachea	Urinary Bladder
Uterus			

OBSERVATIONS

Adrenal Gland	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Inflammation	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Moderate
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
Note: HYPERPLASIA TGLs = 2-5			
Note: LEUKEMIA MONUC TGLs = 2-5			
Lymph Node	Inguinal	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-2			
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Multiple, Mild
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-2			
Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 104

TRT#: 4

SEX: Female

DAY ON TEST: 641

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029449

ORGAN AND ACCOUNTABLE SITE STATUS

Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 105

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86037988

OBSERVATIONS

* Liver

Bile Duct

Basophilic Focus
Hyperplasia
Leukemia Mononuclear

Multiple, Mild
Minimal

[Basophilic Focus TGLS = 4-6]

* Mammary Gland

Duct

Cyst

Mild

Note: CYST TGLs = 1-8

* Spleen

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 3-6

Uterus

Polyp Stromal

Note: POLYP STROMAL TGLs = 2-21

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 106	TRT#: 4	SEX: Female	DAY ON TEST: 731
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86037989

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Lung	* Mammary Gland	* Spleen
------	-----------------	----------

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Moderate
		Mixed Cell Focus	Moderate
Note: ANOM HEPAT LOB TGLs = 1-21			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Focal, Mild
[Adenoma TGLS = 3-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 107

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86037990

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Thyroid Gland

MISSING

Vagina

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST	TGLs = 1-8		
* Spleen		Pigmentation	Mild
Uterus	Cervix	Cyst	
		Polyp Stromal	

Note: TGL 3 ON SLIDE 7 WAS KERATIN CYST

Note: CYST TGLs = 3-7

Note: TGL 4 ON SLIDE 21 CYST NOT FOUND

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 108

TRT#: 4

SEX: Female

DAY ON TEST: 711

DOSE: 225 MG/KG

DISP: Dead

HISTO: A86037991

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	Intestine Small - Duodenum
Islets, Pancreatic	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Ovary	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Ileum	Intestine Small - Jejunum
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OBSERVATIONS

Heart		Inflammation	Chronic, Moderate
Intestine Large	Colon	Parasite Metazoan	Mild
Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Multiple
Lung		Congestion	Moderate
	Lymphatic	Foreign Body	Mild
[Congestion TGLS = 3-2]			
* Mammary Gland	Duct	Cyst	Moderate
		Fibroadenoma	
Note: CYST TGLs = 1-8			
Note: TGL 2 ON SLIDE 21 IS MAMMARY GLAND AND NOT SKIN			
Note: FIBROADENOMA TGLs = 2-21			
Pancreas	Acinar Cell	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hemorrhage	Marked
[Adenoma TGLS = 4-1]			
[Hemorrhage TGLS = 4-1]			
* Spleen		Atrophy	Mild
		Pigmentation	Moderate
Thymus		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 108

TRT#: 4

SEX: Female

DAY ON TEST: 711

DOSE: 225 MG/KG

DISP: Dead

HISTO: A86037991

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 109

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86037992

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

* Mammary Gland

Duct

Cyst

Mild

Note: CYST TGLs = 1-8

Pituitary Gland

Pars Distalis

Adenoma

Note: ADENOMA TGLs = 2-1

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 110

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86037993

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

MISSING

Pituitary Gland

OBSERVATIONS

Adrenal Gland

Medulla

Pheochromocytoma Malignant

Note: PHEOCHROM MAL TGLs = 2-21

Bone

Calvarium

Hyperostosis

Moderate

Note: HYPEROSTOSIS TGLs = 4-22

* Liver

Basophilic Focus

Multiple, Mild

* Mammary Gland

Hyperplasia

Lobular, Mild

Note: HYPERPLASIA TGLs = 1-8

Pituitary Gland

Note: LOST IN PROCESSING

* Spleen

Hematopoietic Cell Proliferation

Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 111	TRT#: 4	SEX: Female	DAY ON TEST: 731
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86037994

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Lung	Lymph Node	* Spleen
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OBSERVATIONS

Bone Note: HYPEROSTOSIS TGLs = 3-22	Calvarium	Hyperostosis	Mild
* Liver	Bile Duct	Basophilic Focus Hyperplasia Fibroadenoma	Multiple, Mild Mild
* Mammary Gland Note: TGL 1 IS ON SLIDE 21 IS MAMMARY GLAND NOT LYMPH NODE Note: FIBROADENOMA TGLs = 1-21			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 112

TRT#: 4

SEX: Female

DAY ON TEST: 569

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83028670

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Lymph Node - Mandibular	* Mammary Gland	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	Uterus

MISSING

Clitoral Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Fibrosis	Multiple, Moderate
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
* Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 2-5		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-4		
Lymph Node	Mesenteric	Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Focal, Moderate
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 1-2		
Note: TGL 1 IS ON SLIDE 2B			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 113

TRT#: 4

SEX: Female

DAY ON TEST: 702

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A86037995

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	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	Nose
Ovary	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Thymus	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

OBSERVATIONS

Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	Mild
Clitoral Gland		Atrophy	Mild
Heart		Inflammation	Chronic, Minimal
Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	Multiple
<p>Note: TGL'S 1&2 RECORDED AS TISSUE NOS WERE MAMMARY GLAND TUMORS</p> <p>Note: FIBROADENOMA TGLs = 1-21,2-22</p>			
Pancreas	Acinar Cell	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
<p>[Adenoma TGLs = 3-1]</p>			
* Spleen		Pigmentation	Moderate
Stomach	Glandular	Mineralization	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 114

TRT#: 4

SEX: Female

DAY ON TEST: 689

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A86037996

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Lung	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Focal, Mild
	Cortex	Vacuolization Cytoplasmic	Mild
* Liver		Basophilic Focus	Multiple, Mild
		Mixed Cell Focus	Mild
Note: BASOPH FOCUS TGLs = 5-6			
Note: MIXED CL FOCUS TGLs = 5-6			
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 3-8			
Pharynx	Palate	Squamous Cell Papilloma	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Moderate
[Adenoma TGLS = 6-1]			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-21,2-21			
Note: TGL'S 1&2 SUBCUTIS CODED AS TISSUE NOS AT NECROPSY			
Note: SHOULD BE SKIN			
* Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	Follicular Cel	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 115

TRT#: 4

DOSE: 225 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 690

HISTO: A86037997

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Ovary
Pancreas	Parathyroid Gland	Pituitary Gland	Salivary Glands
Skin	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

OBSERVATIONS

Ear		Inflammation	Suppurative, Marked
Note: INFLAMMATION	TGLs = 2-22,3-22,4-23		
Heart		Inflammation	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
		Hepatodiaphragmatic Nodule	Moderate
Note: ANOM HEPAT LOB	TGLs = 1-21		
* Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA IS ON SLIDE 8			
* Spleen		Atrophy	Mild
		Pigmentation	Mild
Stomach	Forestomach	Edema	Moderate
	Forestomach	Ulcer	Moderate
Zymbal's Gland		Carcinoma	
Note: CARCINOMA	TGLs = 2-22,3-22,4-23		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 116	TRT#: 4	SEX: Female	DAY ON TEST: 732
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86037998

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Lung	* Mammary Gland	* Spleen
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OBSERVATIONS

Clitoral Gland		Adenoma	
Note: [ADENOMA] TGLs = 1-21			
* Liver	Bile Duct	Basophilic Focus Hyperplasia	Multiple, Mild Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 117

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86037999

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Lung

* Spleen

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

* Mammary Gland

Duct

Cyst

Mild

Mesentery

Fat

Necrosis

Focal, Mild

Note: NECROSIS TGLs = 1-21

Pituitary Gland

Pars Distalis

Cyst

Moderate

Pars Distalis

Hyperplasia

Focal, Moderate

Note: CYST TGLs = 3-1

[Cyst TGLS = 3-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 118

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038000

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
Note: CYST	TGLs = 1-8		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
Note: ADENOMA	TGLs = 3-1		
[Adenoma TGLS = 3-1]			
Thyroid Gland	Follicular Cel	Carcinoma	
Note: CARCINOMA	TGLs = 2-3		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 119

TRT#: 4

DOSE: 225 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 716

HISTO: A86038001

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Ovary	Pancreas
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder
Uterus			

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Cortex	Hypertrophy	Focal, Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow	Myeloid Cell	Hyperplasia	Marked
Heart		Inflammation	Chronic, Mild
Intestine Large	Rectum	Mixed Tumor Malignant	Metastatic (Mammary Gland)
	Colon	Parasite Metazoan	Minimal
Note: TGL 8 IS INTESTINE LARGE NOT MESENTERY			
Note: MIXD TUMOR MAL TGLs = 8-25			
* Liver		Basophilic Focus	Multiple, Mild
		Mixed Tumor Malignant	Metastatic (Mammary Gland)
Note: MIXD TUMOR MAL TGLs = 6-23,7-24			
Lung	Mediastinum	Mixed Tumor Malignant	Metastatic (Mammary Gland)
		Mixed Tumor Malignant	Metastatic (Mammary Gland)
Note: MIXD TUMOR MAL TGLs = 9-26			
Note: MIXD TUMOR MAL TGLs = 10-2			
Lymph Node	Axillary	Mixed Tumor Malignant	Metastatic (Mammary Gland)
Note: MIXD TUMOR MAL TGLs = 3-22			
* Mammary Gland	Duct	Cyst	Moderate
		Mixed Tumor Malignant	
Note: CYST TGLs = 1-8			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 119

TRT#: 4

SEX: Female

DAY ON TEST: 716

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A86038001

ORGAN AND ACCOUNTABLE SITE STATUS

Note: TGL 2&3 ARE MAMMARY GLAND NOT SKIN

Note: MIXD TUMOR MAL TGLs = 2-21,3-22

Pituitary Gland

Pars Distalis

Adenoma

Pars Distalis

Cyst

Multiple, Mild

* Spleen

Hematopoietic Cell Proliferation

Marked

Note: HEMA CELL PROL TGLs = 4-6

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 120

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038002

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

Cyst

Moderate

Eosinophilic Focus

Mild

* Mammary Gland

Duct

Cyst

Mild

Note: CYST

TGLs = 1-8

Uterus

Dilatation

Moderate

Note: DILATATION

TGLs = 2-7

Polyp Stromal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 121

TRT#: 4

SEX: Female

DAY ON TEST: 652

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029561

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Esophagus	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	* Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Intestine Large - Colon

OBSERVATIONS

Bone	Vertebra	Osteosarcoma	
Clitoral Gland	Bilateral Duct	Adenoma	
		Cyst	Mild
		Hyperplasia	Moderate
Note: [ADENOMA] TGLs = 2,3 Note: TGL 2 IS ON SLIDE I Note: HYPERPLASIA TGLs = 3			
Heart		Inflammation	Chronic, Mild
Kidney		Nephropathy	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
Lung		Alveolar/Bronchiolar Adenoma	
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Moderate
Note: CYST TGLs = 4-1 [Adenoma TGLS = 4-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 122

TRT#: 4

SEX: Female

DAY ON TEST: 700

DOSE: 225 MG/KG

DISP: Dead

HISTO: A86038003

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	Intestine Large - Colon
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Kidney	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Thymus

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Rectum
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OBSERVATIONS

Heart		Inflammation	Chronic, Minimal
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2-6			
Note: HYPERPLASIA TGLs = 2-6			
Lung		Congestion	Moderate
	Lymphatic	Foreign Body	Mild
Note: CONGESTION TGLs = 3-4			
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: MAMMARY GLAND			
Note: FIBROADENOMA TGLs = 1-21			
Note: SUBCUTIS CODED AS TISSUE NOS AT NECROPSY ACTUALLY IS			
Pituitary Gland	Pars Distalis	Cyst	Mild
* Spleen		Leukemia Mononuclear	
Uterus	Endometrium	Hyperplasia	Glandular, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 122

TRT#: 4

SEX: Female

DAY ON TEST: 700

DOSE: 225 MG/KG

DISP: Dead

HISTO: A86038003

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 123

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038004

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

Clitoral Gland

Adenoma

Note: [ADENOMA] TGLs = 1-21

* Liver

Basophilic Focus

Multiple, Mild

* Mammary Gland

Duct

Cyst

Mild

Uterus

Polyp Stromal

Note: POLYP STROMAL TGLs = 2-7

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 124

TRT#: 4

SEX: Female

DAY ON TEST: 287

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A82026662

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Clitoral Gland
Esophagus	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	* Liver	Lung
Lymph Node - Mandibular	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 Gland	Cortex	Accessory Adrenal Cortical Nodule	
Brain		Compression	Mild
Note: COMPRESSION TGLs = 5-1			
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 2-8			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
Note: ANGIECTASIS TGLs = 4-1			
Note: ADENOMA TGLs = 4-1			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 125 **TRT#:** 4 **SEX:** Female **DAY ON TEST:** 511
DOSE: 225 MG/KG **DISP:** Moribund **HISTO:** A83028183

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lung	Lymph Node - Mandibular
Nose	Ovary	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder
Uterus			

MISSING

Clitoral Gland

OBSERVATIONS

Heart		Inflammation	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Minimal
Lymph Node	Mesenteric	Depletion Lymphoid	Moderate
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 2-8			
Note: TGL 2 IS ON SLIDE 8			
Mesentery	Fat	Inflammation	Chronic, Moderate
Note: INFLAMMATION TGLs = 3			
Note: TGL 3 IS ON SLIDE I.MESOMETRIUM IS CODED AS MESENTERY			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
Note: ANGIECTASIS TGLs = 4-1			
Note: [ADENOMA] TGLs = 4-1,5-1			
* Spleen		Pigmentation	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 126

TRT#: 4

SEX: Female

DAY ON TEST: 678

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83029848

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
* Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	Uterus

MISSING

Clitoral Gland

OBSERVATIONS

Brain		Compression	Marked
Note: COMPRESSION	TGLs = 5-1		
Kidney	Renal Tubule	Degeneration	Mild
		Nephropathy	Chronic, Minimal
* Liver		Inflammation	Granulomatous, Multiple, Mild
Lymph Node	Mesenteric	Pigmentation	Mild
Note: PIGMENT	TGLs = 4-6		
Note: TGL 4 IS ON SLIDE 6B			
* Mammary Gland	Duct	Cyst	Mild
Note: CYST	TGLs = 2-8		
Note: TGL 2 & 3 ARE ON SLIDES II AND III			
Note: CYST	TGLs = 2		
Note: CYST	TGLs = 3		
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 6-1		
Skin	Subcut Tiss	Sarcoma	
Note: SARCOMA	TGLs = 1		
Note: TGL 1 IS ON SLIDE I			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 127

TRT#: 4

SEX: Female

DAY ON TEST: 682

DOSE: 225 MG/KG

DISP: Dead

HISTO: A83029849

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Brain
Islets, Pancreatic
Pancreas
Skin
Thyroid Gland

Adrenal Gland - Medulla
Clitoral Gland
Lymph Node - Mesenteric
Parathyroid Gland
Stomach - Forestomach
Trachea

Bone
Esophagus
Nose
Pituitary Gland
Stomach - Glandular
Urinary Bladder

Bone Marrow
Intestine Small - Duodenum
Ovary
Salivary Glands
Thymus
Uterus

MISSING

Lymph Node - Mandibular

AUTO PRECLUDES DIAG.

Intestine Large - Cecum
Intestine Small - Jejunum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Ileum

OBSERVATIONS

Heart
Kidney
* Liver

Lung
Note: CONGESTION TGLs = 2-4
* Mammary Gland

Note: CYST TGLs = 1-8
* Spleen

Renal Tubule

Duct

Inflammation
Mineralization
Basophilic Focus
Necrosis
Congestion

Cyst
Fibroadenoma

Pigmentation

Chronic, Minimal
Minimal
Multiple, Mild
Focal, Mild
Mild

Moderate

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 128	TRT#: 4	SEX: Female	DAY ON TEST: 732
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86038005

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Skin * Spleen

OBSERVATIONS

Clitoral Gland	Duct	Adenoma Cyst Inflammation	Moderate Suppurative, Mild
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Note: INFLAMMATION TGLs = 2-8
[Cyst TGLS = 2-8]
[Inflammation TGLS = 2-8]

* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst Fibroadenoma	Mild

Note: CYST TGLs = 1-8
[Cyst TGLS = 3-21]

Pituitary Gland	Pars Distalis	Adenoma	
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[Adenoma TGLS = 4-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 129

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038006

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

Inflammation

Granulomatous, Multiple, Mild

* Mammary Gland

Duct

Cyst

Mild

Hyperplasia

Lobular, Mild

Note: CYST TGLs = 1-8

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 130	TRT#: 4	SEX: Female	DAY ON TEST: 732
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86038007

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Mammary Gland	* Spleen
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OBSERVATIONS

* Liver	Basophilic Focus	Multiple, Mild
	Eosinophilic Focus	Mild
Bile Duct	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 131

TRT#: 4

SEX: Female

DAY ON TEST: 682

DOSE: 225 MG/KG

DISP: Dead

HISTO: A83029850

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Ovary	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

MISSING

Intestine Large - Colon

AUTO PRECLUDES DIAG.

Intestine Small - Ileum

OBSERVATIONS

Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	Mild
Brain		Compression	Moderate
[Compression TGLS = 8-1]			
Heart		Inflammation	Chronic, Mild
Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Nodular, Mild
		Leukemia Mononuclear	
Note: HYPERPLASIA TGLs = 4-5			
Note: LEUKEMIA MONUC TGLs = 5-5			
Lung		Congestion	Moderate
Note: CONGESTION TGLs = 6-4			
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hemorrhage	Marked
[Adenoma TGLS = 7-1]			
[Hemorrhage TGLS = 7-1]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 131

TRT#: 4

SEX: Female

DAY ON TEST: 682

DOSE: 225 MG/KG

DISP: Dead

HISTO: A83029850

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-2]

Thyroid Gland

Degeneration

Cystic, Mild

Uterus

Polyp Stromal

Multiple

Note: TGL 2 UTERUS IS ON SLIDE (II)

Note: POLYP STROMAL TGLs = 2

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 132	TRT#: 4	SEX: Female	DAY ON TEST: 732
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86038008

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Skin * Spleen

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Lobular, Mild
Note: FIBROADENOMA TGLs = 1-21			
Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
Note: CYST TGLs = 2-1			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 133

TRT#: 4

DOSE: 225 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 708

HISTO: A86038009

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Ovary	Parathyroid Gland	Salivary Glands	Skin
Stomach - Glandular	Thymus	Trachea	Urinary Bladder
Uterus			

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Brain		Compression	Moderate
Note: COMPRESSION TGLs = 4-1			
Heart		Inflammation	Chronic, Mild
Kidney		Nephropathy	Chronic, Moderate
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Mild
		Hepatodiaphragmatic Nodule	
Note: ANOM HEPAT LOB TGLs = 2-21		Vacuolization Cytoplasmic	Mild
Note: EOSIN FOCUS TGLs = 2-21			
* Mammary Gland	Duct	Cyst	Mild
Note: CYST TGLs = 1-8			
Pancreas	Acinar Cell	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
Note: ADENOMA TGLs = 3-1			
* Spleen		Pigmentation	Moderate
Stomach	Forestomach	Edema	Moderate
	Forestomach	Ulcer	Moderate
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 134

TRT#: 4

SEX: Female

DAY ON TEST: 417

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83027686

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Intestine Small - Ileum	Islets, Pancreatic	Kidney
Lung	Lymph Node - Mandibular	Nose	Ovary
Parathyroid Gland	Salivary Glands	Stomach	Thymus
Thyroid Gland	Trachea	Urinary Bladder	Uterus

MISSING

Clitoral Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Jejunum	Pituitary Gland	

OBSERVATIONS

Adrenal Gland Note: TGL 2 IS ON SLIDE 6B Note: HYPERTROPHY TGLs = 2-6	Cortex	Hypertrophy	Focal, Marked
Blood Vessel Note: AORTA-HYPERTROPHY ON SLIDE 4	Aorta, Media	Hypertrophy	Moderate
Heart	Atrium	Thrombosis	Marked
* Liver Note: ANOM HEPAT LOB TGLs = 9 Note: TGL 9 ON SLIDE IV	Serosa	Hepatodiaphragmatic Nodule Inflammation	Moderate Suppurative, Mild
Lymph Node Note: TGL 5 IS ON SLIDE 6B Note: HYPERPLASIA TGLs = 13-2 Note: HYPERPLASIA TGLs = 5-6 Note: HYPERPLASIA TGLs = 12-2	Mediastinal Mesenteric	Hyperplasia Hyperplasia	Lymphoid, Mild Lymphoid, Moderate
* Mammary Gland		Hyperplasia	Lobular, Mild
Mesentery Note: NECROSIS TGLs = 8 Note: TGL 8 ON SLIDE III CODED AS MESENTERY NOT SMALL INTESTINE	Fat	Necrosis	Focal, Marked
Pancreas		Polyarteritis	Multiple, Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 134

TRT#: 4

SEX: Female

DAY ON TEST: 417

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83027686

ORGAN AND ACCOUNTABLE SITE STATUS

Note: POLYARTERITIS TGLs = 6

Note: POLYARTERITIS TGLs = 7

Note: TGL 6 IS ON SLIDE II LESION ON SLIDE II IS PANCREAS,NOT

Note: TGL 7 IS ON SLIDE II

Note: MESENTERY

Skin

Subcut Tiss

Thrombosis

Multiple, Moderate

Note: THROMBUS TGLs = 11

Note: TGL 11 IS ON SLIDE V

* Spleen

Fibrosis

Mild

Hematopoietic Cell Proliferation

Mild

Necrosis

Moderate

Note: NECROSIS TGLs = 4

Note: TGL 4 IS ON SLIDE I AND I-1

Note: FIBROSIS TGLs = 4

Note: HEMA CELL PROL TGLs = 3-2,3-2-1

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 135

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038010

OBSERVATIONS

* Liver

Basophilic Focus
Hematopoietic Cell Proliferation
Inflammation
Leukemia Mononuclear

Multiple, Moderate
Mild
Granulomatous, Multiple, Mild

Note: BASOPH FOCUS TGLs = 1-6

* Mammary Gland

Duct
Pars Distalis

Cyst
Adenoma

Moderate

Pituitary Gland

[Adenoma TGLS = 3-1]

* Spleen

Hematopoietic Cell Proliferation
Leukemia Mononuclear

Mild

Thyroid Gland

C Cell
C Cell

Carcinoma
Hyperplasia

Mild

[Carcinoma TGLS = 2-3]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 136

TRT#: 4

SEX: Female

DAY ON TEST: 708

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A86038011

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland		Inflammation	Suppurative, Moderate
* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Mild
		Fibroadenoma	
Note: FIBROADENOMA TGLs = 1-21			
Note: TGL 1 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN			
Pharynx	Palate	Squamous Cell Carcinoma	
Note: TGL 2 IS SQUAM CELL CARC ON HARD PALATE			
Note: SQUAM CEL CARC TGLs = 2-9-2,2-9-2.1,2-9-3			
Pituitary Gland	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Focal, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 137

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038012

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Skin * Spleen

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland		Fibroadenoma	Multiple
Note: TGL 1 ON SLIDE 21 IS MAMMARY GLAND NOT SKIN			
Note: FIBROADENOMA TGLs = 1-21			
Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
	Pars Distalis	Hyperplasia	Focal, Mild
Note: HYPERPLASIA TGLs = 2-1			
[Cyst TGLS = 2-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 138

TRT#: 4

SEX: Female

DAY ON TEST: 337

DOSE: 225 MG/KG

DISP: Dead

HISTO: A83027687

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Clitoral Gland	Esophagus	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	* Liver
Lung	Lymph Node - Mesenteric	* Mammary Gland	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Brain Note: TGL 7 IS ON SLIDE II-BRAIN MENINGES Note: CARCINOMA TGLs = 7	Meninges	Carcinoma	Metastatic (Zymbal'S Gland)
Lymph Node Note: HYPERPLASIA TGLs = 3-2	Mandibular	Hyperplasia	Lymphoid, Moderate
Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
* Spleen Note: HEMA CELL PROL TGLs = 5-2		Hematopoietic Cell Proliferation	Moderate
Zymbal's Gland Note: CARCINOMA TGLs = 6 Note: TGL 6 IS ON SLIDE I-TISSUE IS ZYMBALS GLAND Note: INFLAMMATION TGLs = 6		Carcinoma Inflammation	Suppurative, Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 139

TRT#: 4

DOSE: 225 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 710

HISTO: A86038013

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Ovary	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	Mild
Clitoral Gland		Adenoma	
Note: TGL 2 ON SLIDE 21 IS CLITORAL GLAND NOT SKIN			
Note: [ADENOMA] TGLs = 2-21			
* Liver		Basophilic Focus	Multiple, Mild
		Hematopoietic Cell Proliferation	Minimal
	Bile Duct	Hyperplasia	Minimal
Lung	Alveolus	Pigmentation	Minimal
Note: PIGMENT TGLs = 7-2			
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Angiectasis	Mild
[Angiectasis TGLs = 5-1]			
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLs = 4-6]			
Thyroid Gland	C Cell	Adenoma	
		Angiectasis	Moderate
[Adenoma TGLs = 6-3]			
[Angiectasis TGLs = 6-3]			
Uterus	Endometrium	Hyperplasia	Cystic, Moderate
		Polyp Stromal	
Note: POLYP STROMAL TGLs = 3-22			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 139

TRT#: 4

SEX: Female

DAY ON TEST: 710

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A86038013

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 140

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038014

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Bile Duct

Basophilic Focus

Multiple, Mild

Dilatation

Moderate

Bile Duct

Hyperplasia

Mild

Inflammation

Granulomatous, Multiple, Minimal

* Mammary Gland

Duct

Cyst

Mild

Hyperplasia

Lobular, Mild

Note: CYST TGLs = 1-8

Pituitary Gland

Pars Distalis

Adenoma

[Adenoma TGLS = 2-1]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 141	TRT#: 4	SEX: Female	DAY ON TEST: 732
	DOSE: 225 MG/KG	DISP: Terminal Sacrifice	HISTO: A86038015

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Uterus

OBSERVATIONS

* Liver	Bile Duct	Hyperplasia Hyperplasia Leukemia Mononuclear	Mild Nodular, Moderate
[Hyperplasia TGLS = 3-6] [Leukemia Mononuclear TGLS = 3-6]			
Lymph Node Note: LEUKEMIA MONUC TGLs = 6-7	Pancreatic	Leukemia Mononuclear	
* Mammary Gland Note: CYST TGLs = 1-8	Duct	Cyst	Moderate
Pituitary Gland [Adenoma TGLS = 5-1]	Pars Distalis	Adenoma	
* Spleen [Leukemia Mononuclear TGLS = 2-6]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 142

TRT#: 4

SEX: Female

DAY ON TEST: 501

DOSE: 225 MG/KG

DISP: Dead

HISTO: A83028084

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Clitoral Gland
Intestine Large - Rectum
Islets, Pancreatic
Lymph Node - Mesenteric
Pancreas
Stomach - Forestomach
Trachea

Adrenal Gland - Medulla
Esophagus
Intestine Small - Duodenum
Kidney
* Mammary Gland
Parathyroid Gland
Stomach - Glandular
Urinary Bladder

Bone
Intestine Large - Cecum
Intestine Small - Ileum
* Liver
Nose
Salivary Glands
Thymus

Bone Marrow
Intestine Large - Colon
Intestine Small - Jejunum
Lymph Node - Mandibular
Ovary
Skin
Thyroid Gland

OBSERVATIONS

Brain
Note: COMPRESSION TGLs = 7-1
Heart
Lung
Note: CONGESTION TGLs = 5-4
Pituitary Gland
Note: ADENOMA TGLs = 6-1
Note: ANGIECTASIS TGLs = 6-1
* Spleen
Uterus
Note: TGL 3 IS ON SLIDE I
Note: POLYP STROMAL TGLs = 3

Pars Distalis
Pars Distalis

Compression
Hydrocephalus
Inflammation
Congestion
Adenoma
Angiectasis
Pigmentation
Polyp Stromal
Moderate
Marked
Chronic, Moderate
Moderate
Marked
Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 143

TRT#: 4

DOSE: 225 MG/KG

SEX: Female

DISP: Moribund

DAY ON TEST: 689

HISTO: A86038016

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	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	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Cortex	Hypertrophy	Focal, Mild
Brain		Compression	Moderate
[Compression TGLS = 4-1]			
Clitoral Gland	Duct	Cyst	Moderate
Kidney		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	Multiple, Mild
		Eosinophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST TGLs = 1-8			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hemorrhage	Marked
[Adenoma TGLS = 3-1]			
[Hemorrhage TGLS = 3-1]			
* Spleen		Pigmentation	Mild
Uterus	Endometrium	Hyperplasia	Cystic, Moderate
Note: HYPERPLASIA TGLs = 2-21			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 144

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038017

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

Bone	Calvarium	Hyperostosis	Mild
Note: HYPEROSTOSIS	TGLs = 1-21		
* Liver		Basophilic Focus	Multiple, Mild
		Inflammation	Granulomatous, Multiple, Minimal
* Mammary Gland	Duct	Cyst	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
[Adenoma TGLS = 2-1]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 145

TRT#: 4

SEX: Female

DAY ON TEST: 366

DOSE: 225 MG/KG

DISP: Moribund

HISTO: A83027688

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Pituitary Gland	Pars Distalis	Cyst	Multiple, Minimal
* Spleen		Sarcoma	
Note: SARCOMA TGLs = 1			
Note: TGL 1 IS ON SLIDE I			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 146

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038018

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Lung

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Cyst	Moderate
		Hyperplasia	Lobular, Mild
Note: CYST	TGLs = 2-8		
* Spleen		Hematopoietic Cell Proliferation	Mild
Uterus		Polyp Stromal	Multiple
Note: POLYP STROMAL	TGLs = 1-7		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 147

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038019

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Spleen

OBSERVATIONS

* Liver

Basophilic Focus

Multiple, Mild

Inflammation

Granulomatous, Multiple, Mild

* Mammary Gland

Duct

Cyst

Mild

Fibroadenoma

Multiple

Hyperplasia

Lobular, Mild

Note: FIBROADENOMA TGLs = 1-21,2-21

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 148

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 225 MG/KG

DISP: Dead

HISTO: A86038020

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Brain
Esophagus	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Islets, Pancreatic	Lymph Node - Mesenteric	Nose	Ovary
Parathyroid Gland	Salivary Glands	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Thymus

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Small - Ileum	Intestine Small - Jejunum
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OBSERVATIONS

Bone Marrow		Leukemia Mononuclear	
Clitoral Gland	Duct	Cyst	Mild
Eye	Retina	Degeneration	Moderate
	Cornea	Edema	Moderate
Note: EDEMA	TGLs = 1-9		
Heart		Inflammation	Chronic, Mild
Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	Multiple, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-6		
Note: BASOPH FOCUS	TGLs = 7-6		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-2		
Lymph Node	Mandibular	Leukemia Mononuclear	
* Mammary Gland	Duct	Cyst	Moderate
Note: CYST	TGLs = 3-8		
Pancreas	Acinar Cell	Atrophy	Mild
Pituitary Gland	Pars Distalis	Cyst	Multiple, Mild
	Pars Distalis	Hyperplasia	Focal, Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 148	TRT#: 4	SEX: Female	DAY ON TEST: 731
	DOSE: 225 MG/KG	DISP: Dead	HISTO: A86038020

ORGAN AND ACCOUNTABLE SITE STATUS

Skin	Subcut Tiss	Fibroma Ulcer	Marked
Note: FIBROMA	TGLs = 2-21		
Note: ULCER	TGLs = 2-21		
* Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-6		
Uterus		Adenocarcinoma	
Note: ADENOCARC	TGLs = 4-22		

PRIMARY CAUSE OF DEATH

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: gamma-Butyrolactone

CAS Number: 96-48-0

Date Report Requested: 10/15/2014

Time Report Requested: 14:04:44

First Dose M/F: NA / NA

Lab: SRI

ANIMAL ID: 149

TRT#: 4

SEX: Female

DAY ON TEST: 376

DOSE: 225 MG/KG

DISP: Dead

HISTO: A83027689

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex
Brain
Intestine Large - Rectum
Islets, Pancreatic
Lymph Node - Mesenteric
Pancreas
Stomach - Forestomach
Urinary Bladder

Adrenal Gland - Medulla
Esophagus
Intestine Small - Duodenum
Kidney
* Mammary Gland
Parathyroid Gland
Stomach - Glandular
Uterus

Bone
Heart
Intestine Small - Ileum
* Liver
Nose
Salivary Glands
Thyroid Gland

Bone Marrow
Intestine Large - Colon
Intestine Small - Jejunum
Lymph Node - Mandibular
Ovary
Skin
Trachea

MISSING

Clitoral Gland Thymus

AUTO PRECLUDES DIAG.

Intestine Large - Cecum * Spleen

OBSERVATIONS

Lung Mediastinum Foreign Body Moderate
Note: FOREIGN BODY POSSIBLY OIL NO INFLAMMATION PRESENT

Pituitary Gland Pars Distalis Adenoma
Pars Distalis Angiectasis Marked

Note: ADENOMA TGLs = 1-1

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05002-05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: gamma-Butyrolactone
CAS Number: 96-48-0

Date Report Requested: 10/15/2014
Time Report Requested: 14:04:44
First Dose M/F: NA / NA
Lab: SRI

ANIMAL ID: 150

TRT#: 4

SEX: Female

DAY ON TEST: 732

DOSE: 225 MG/KG

DISP: Terminal Sacrifice

HISTO: A86038021

OBSERVATIONS

* Liver		Basophilic Focus	Multiple, Mild
* Mammary Gland	Duct	Leukemia Mononuclear Cyst Fibroadenoma	Marked
Note: FIBROADENOMA	TGLs = 2-21		
Note: CYST	TGLs = 1-8		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
[Adenoma TGLS = 3-1]			
[Angiectasis TGLS = 3-1]			
* Spleen		Leukemia Mononuclear	
Uterus	Endometrium	Hyperplasia	Cystic, Moderate
Note: HYPERPLASIA	TGLs = 4-7		

PRIMARY CAUSE OF DEATH

-

**** END OF REPORT ****

* PROTOCOL REQUIRED TISSUE