

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**C Number:** C55743  
**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:** 01/06/1988

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Liver
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Lymph Node - Mandibular	Mammary Gland	Prostate
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Minimal
Note: HYPEROSTOSIS TGLs = 1-10			
Kidney	Cortex	Mineralization	Minimal
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 3-1			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Note: ANGIECTASIS TGLs = 7-5			
Preputial Gland		Dilatation	Mild
		Inflammation	Chronic Active, Minimal
Note: DILATATION TGLs = 2-9			
Seminal Vesicle		Concretion	Mild
		Fibrosis	Mild
Note: CONCRETION TGLs = 4-4,5-4			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Seminif Tub	Atrophy	Minimal
Tooth	Incisor	Developmental Malformation	Minimal

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Islets, Pancreatic	Pancreas	Stomach - Forestomach
Stomach - Glandular			

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**OBSERVATIONS**

Liver		Hemangiosarcoma	
Note: HEMANGIOSARC	TGLs = 4-2,5-2		
Mesentery	Fat	Necrosis	Marked
Preputial Gland		Necrosis	Moderate
Note: NECROSIS	TGLs = 2-3		

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 652 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Heart	Nose	Pituitary Gland	Skin
Stomach - Forestomach	Trachea		

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**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Islets, Pancreatic	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Pancreas	Parathyroid Gland
Spleen	Thymus	Thyroid Gland	

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**AUTO PRECLUDES DIAG.**

Epididymis	Gallbladder	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Kidney	Liver	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Glandular	Testes	Urinary Bladder

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**OBSERVATIONS**

Lung	Alveolar/Bronchiolar Carcinoma
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Note: PIECE OF LUNG TUMOR IN SLIDE #5

[ Alveolar/Bronchiolar Carcinoma TGLS = 1-1,2-1 ]

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**PRIMARY CAUSE OF DEATH** -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 682 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Mild
[ Hyperostosis TGLS = 3-11 ]			
Lung		Hemorrhage	Minimal
Skin	Subcut Tiss	Fibrosarcoma	
	Subcut Tiss	Sarcoma	
Note: SARCOMA	TGLs = 2-10		
Note: FIBROSARC	TGLs = 1-9		
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b> Lung	Stomach - Forestomach	Stomach - Glandular	Trachea
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<b>OBSERVATIONS</b> Preputial Gland		Dilatation Inflammation	Moderate Chronic Active, Mild
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Note: DILATATION TGLs = 1-1

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<b>PRIMARY CAUSE OF DEATH</b>	-
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 592 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 3-11			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Skin	Subcut Tiss	Fibrosarcoma	
		Necrosis	Moderate
Note: FIBROSARC TGLs = 1-2,2-2			
Note: THIS NEOPLASM HAS FEATURES OF A NEUROFIBROSARCOMA			
Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 682 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose	Pancreas
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Bone Note: HYPEROSTOSIS TGLs = 3-11	Tarsal	Hyperostosis	Mild
Liver		Hepatocellular Adenoma	
Lymph Node Note: ANGIOECTASIS TGLs = 4-5	Mesenteric Mesenteric	Angiectasis Hematopoietic Cell Proliferation	Mild Minimal
Skin Note: FIBROMA TGLs = 1-9,2-10	Subcut Tiss	Fibroma	Multiple
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b> Islets, Pancreatic Stomach - Glandular	Pancreas	Spleen	Stomach - Forestomach
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<b>OBSERVATIONS</b> Bone [ Hyperostosis TGLS = 2-4 ] Liver Note: HEPATOCLR CARC TGLs = 6-2 Preputial Gland [ Inflammation TGLS = 3-3 ]	Tarsal	Hyperostosis  Hepatocellular Carcinoma Necrosis  Dilatation Inflammation	Mild  Mild  Moderate Chronic Active, Minimal
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<b>PRIMARY CAUSE OF DEATH</b>	-
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Liver		Hepatocellular Carcinoma	
		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 5-2+3.1,6-2+3.1			
Note: HEPATOCLR CARC TGLs = 4-3.1			
Note: NODULE WITHIN NODULE.			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS TGLs = 3-5			
Note: RENAL LYMPH NODE APPEARS NORMAL.			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-9			
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

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

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**MISSING**

Lymph Node - Mandibular

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Minimal
	Papilla	Mineralization	Minimal
Lung		Alveolar/Bronchiolar Adenoma	
		Infiltration Cellular	Histiocyte, Minimal
Note: ALV BRON ADEN TGLs = 3-1			
Note: ALVEOLAR MACROPHAGES AND CHOLESTEROL-CLEFTS			
Note: IN THE LUMEN OF A BRONCHIOLE			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Preputial Gland		Dilatation	Mild
Note: DILATATION TGLs = 1-9			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 543 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
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	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

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**MISSING**

Mammary Gland	Parathyroid Gland	Skin	
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Papilla	Mineralization	Minimal
Lung		Congestion	Mild

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 614 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Ear	Epididymis	Esophagus	Eye
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Liver	Lung
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Skin	Subcut Tiss	Fibrosarcoma	Multiple
Note: THIS MASS SURROUNDS THE EAR AND IS			
Note: ADJACENT TO THE SALIVARY GLAND			
Note: FIBROSARC TGLs = 1-11,2-11			
Spleen		Hematopoietic Cell Proliferation	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 1-9			
Brain			
Note: DISTENDED VENTRICLES			
Lung		Alveolar/Bronchiolar Adenoma	Multiple
		Hemorrhage	Minimal
		Infiltration Cellular	Histiocyte, Minimal
Note: ALV BRON ADEN TGLs = 2-1,4-1			
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Note: ANGIECTASIS TGLs = 3-5			

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Bone Note: HYPEROSTOSIS TGLs = 1-2	Tarsal	Hyperostosis	Mild
Liver		Angiectasis	Mild
Lymph Node Note: HYPERPLASIA TGLs = 2-1	Mesenteric Mesenteric	Angiectasis Hyperplasia	Minimal Lymphoid, Moderate

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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
Prostate	Salivary Glands	Seminal Vesicle	Skin
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland Note: LARGE MEDULLA	Capsule	Hyperplasia	Minimal
Bone Note: HYPEROSTOSIS TGLs = 1-10	Tarsal	Hyperostosis	Mild
Liver Note: PROBABLY AN ADENOMA IN THE SECTION CIRCLED.		Necrosis	Minimal
Lung		Congestion	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Preputial Gland Note: INFLAMMATION TGLs = 3-9		Inflammation	Acute, Moderate
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 6

TRT#: 1

SEX: Male

DAY ON TEST: 184

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Heart	Intestine Large - Colon
Intestine Small - Duodenum	Islets, Pancreatic	Liver	Lung
Lymph Node - Mandibular	Nose	Pancreas	Parathyroid Gland
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea

MISSING

Esophagus	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Ileum
Intestine Small - Jejunum	Lymph Node - Mesenteric	Mammary Gland	Pituitary Gland

AUTO PRECLUDES DIAG.

Gallbladder

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Mild
Prostate		Inflammation	Chronic Active, Moderate
Skin	Prepuce	Hemorrhage	Mild
		Necrosis	Marked
Note: BACTERIAL COLONIES IN PREPUCE AND PROSTATE			
Note: NECROSIS TGLs = 1-5			
Spleen		Hematopoietic Cell Proliferation	Moderate
Urinary Bladder		Inflammation	Chronic Active, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Liver	Hepatocellular Adenoma
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Note: HEPATOCLR ADEN TGLs = 3-2

Skin	Subcut Tiss	Sarcoma
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Note: MANY CELLS WITH MULTIPLE NUCLEI AND BIZARRE NUCLEI

Note: SARCOMA TGLs = 1-3

Spleen	Hematopoietic Cell Proliferation	Moderate
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Note: HEMA CELL PROL TGLs = 4-2

Note: MEGAKARYOCYTES INCREASED

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

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**MISSING**

Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Lung	Alveolar Epith	Hyperplasia	Mild
Lymph Node	Mesenteric	Angiectasis	Minimal
Note: ANGIECTASIS TGLs = 3-5			
Preputial Gland		Dilatation	Moderate
Note: DESQUAMATED MATERIAL IN DUCTS [ Dilatation TGLS = 2-9 ]			
Spleen		Hematopoietic Cell Proliferation	Minimal
Testes	Seminif Tub	Mineralization	Minimal

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 7	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 207 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Epididymis
Liver	Pituitary Gland	Testes	

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**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Islets, Pancreatic	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Thymus	Thyroid Gland

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**AUTO PRECLUDES DIAG.**

Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Kidney	Lung	Prostate
Salivary Glands	Seminal Vesicle	Spleen	Stomach - Forestomach
Stomach - Glandular	Trachea	Urinary Bladder	

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**OBSERVATIONS**

Skin	Prepuce	Hemorrhage	Mild
	Prepuce	Inflammation	Acute, Moderate
	Prepuce	Necrosis	Marked

Note: NECROSIS      TGLs = 1-6

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<b>PRIMARY CAUSE OF DEATH</b>	-
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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 7	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Spleen	Stomach - Forestomach	Thymus
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**MISSING**

Lymph Node - Mesenteric

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**OBSERVATIONS**

Lymph Node Note: INFILTRAT CELL TGLs = 3-2	Mediastinal	Infiltration Cellular	Histiocyte, Mild
Mesentery Note: NECROSIS TGLs = 4-2	Fat	Necrosis	Marked
Stomach	Glandular	Inflammation	Chronic Active, Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 7	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Lung	Nose	Pancreas	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea			

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**MISSING**

Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland	Skin
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**OBSERVATIONS**

Adrenal Gland	Cortex Capsule	Adenoma Hyperplasia	Minimal
Islets Panc Note: A FEW LARGE ISLETS.			
Liver Note: HEPATOCLR ADEN TGLs = 3-2		Hepatocellular Adenoma	
Lymph Node	Mesenteric Mesenteric	Angiectasis Hematopoietic Cell Proliferation	Mild Minimal
Preputial Gland Note: ATROPHY TGLs = 2-9		Atrophy Inflammation	Mild Chronic Active, Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Urinary Bladder		Angiectasis	Mild

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

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

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**MISSING**

Lymph Node - Mandibular Thymus	Mammary Gland	Parathyroid Gland	Prostate
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney		Cyst	
		Fibrosis	Minimal
[ Cyst TGLS = 4-3 ]			
Preputial Gland		Inflammation	Chronic Active, Mild
Note: INFLAMMATION TGLs = 2-9			
Note: DESQUAMATED MATERIAL IN LUMINA OF DUCTS			
Spleen		Hematopoietic Cell Proliferation	Minimal

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b>			
Gallbladder	Liver	Seminal Vesicle	Spleen
Stomach - Forestomach	Stomach - Glandular		

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<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Casts Protein Regeneration	Minimal Mild
Note: REGENERATION	TGLs = 4-2		

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<b>PRIMARY CAUSE OF DEATH</b>	-		
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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 8

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Minimal
Lymph Node			
Note: BE THE ABDOMINAL MASS #4			
Note: AROUND TWO LYMPH NODES AND URETER. COULD THIS			
Note: A POOL OF BLOOD AND LOOSE ADIPOSE TISSUE			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 3-10			
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: HEMA CELL PROL TGLs = 6-5			
Preputial Gland		Dilatation	Mild
Note: DILATATION TGLs = 4-9			
Skin		Necrosis	Mild
Note: NECROSIS TGLs = 1-9			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

Stomach - Glandular

Trachea

**OBSERVATIONS**

Liver

Hepatocellular Adenoma

Multiple

Note: HEPATOCLR ADEN TGLs = 5-3,6-3

Lung

Alveolar/Bronchiolar Carcinoma

Note: ALV BRON CARC TGLs = 3-2

Lymph Node

Mesenteric

Angiectasis

Moderate

Note: ANGIECTASIS TGLs = 4-3

Urinary Bladder

Calculus Micro Observation Only

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Spleen	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Lymph Node - Mesenteric

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS    TGLs = 2-9			
Stomach	Forestomach	Hyperkeratosis	Minimal
	Glandular	Inflammation	Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 247

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Islets, Pancreatic  
Pituitary Gland  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Liver  
Salivary Glands  
Stomach - Glandular

Bone  
Esophagus  
Intestine Small - Ileum  
Nose  
Seminal Vesicle  
Testes

Bone Marrow  
Heart  
Intestine Small - Jejunum  
Pancreas  
Skin  
Thyroid Gland

**MISSING**

Gallbladder  
Lymph Node - Mesenteric

Intestine Large - Rectum  
Mammary Gland

Intestine Small - Duodenum  
Parathyroid Gland

Lymph Node - Mandibular  
Prostate

**OBSERVATIONS**

Kidney  
Lung  
Spleen  
Thymus  
Urinary Bladder

Cortex

Mineralization  
Inflammation  
Hematopoietic Cell Proliferation  
Atrophy  
Inflammation

Mild  
Chronic Active, Mild  
Mild  
Mild  
Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:12  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 10	TRT#: 2 DOSE: 2.5%	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 730 HISTO:
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Stomach - Forestomach	Stomach - Glandular	Trachea
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hypertrophy	Mild
Liver		Hemangiosarcoma	
		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 6-3			
Note: POSSIBILITY OF A KUPFFER CELL SARCOMA OR			
Note: HISTIOCYTIC LYMPHOMA			
Lung	Alveolar Epith	Hyperplasia	Mild
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA TGLs = 2-5			
Spleen		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 4-1			
Note: SARCOMATOUS AREAS			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 10

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Lymph Node - Mandibular

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hypertrophy	Minimal
Liver		Hepatocellular Carcinoma	
[ Hepatocellular Carcinoma TGLS = 6-2 ]			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIOECTASIS TGLs = 4-5			
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Hyperkeratosis	Minimal
	Glandular	Inflammation	Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 727

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Epididymis
Esophagus	Heart	Intestine Large - Colon	Islets, Pancreatic
Liver	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Trachea	

MISSING

Mammary Gland	Thymus	Thyroid Gland	
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AUTO PRECLUDES DIAG.

Gallbladder	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Urinary Bladder	

OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 5-7	Medulla	Pheochromocytoma Benign	
Brain		Mineralization	Mild
Kidney	Cortex	Mineralization	Minimal
Lung Note: ALV BRON ADEN TGLs = 2-1		Alveolar/Bronchiolar Adenoma	
Skin Note: IN PENIS/PREPUCE Note: PROTEINACEOUS MATERIAL AND SPERMATOZOA			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 11	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Gallbladder	Liver
Preputial Gland	Stomach - Forestomach	Stomach - Glandular	

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Joint	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 7-5			
Skin	Subcut Tiss	Hemangiosarcoma	
	Subcut Tiss	Necrosis	Moderate
Note: HEMANGIOSARC TGLs = 2-4			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 5-1			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 11

TRT#: 3

SEX: Male

DAY ON TEST: 660

DOSE: 5.0%

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Lymph Node - Mandibular

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Moderate
[ Hyperostosis TGLS = 5-9 ]			
Lung		Alveolar/Bronchiolar Carcinoma	
Pituitary Gland	Pars Distalis	Cyst	
Skin	Subcut Tiss	Fibrosarcoma	Multiple
[ Fibrosarcoma TGLS = 1-10,2-10 ]			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 3-3			
Stomach	Glandular	Inflammation	Chronic Active, Mild
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 12

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	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	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Mammary Gland	Pituitary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS	TGLs = 2-11		
Liver		Fatty Change	Focal, Minimal
Preputial Gland		Inflammation	Chronic Active, Mild
		Necrosis	Minimal
Note: NECROSIS	TGLs = 4-10		
Skin	Subcut Tiss	Fibroma	Multiple
		Necrosis	Mild
Note: FIBROMA	TGLs = 1-9		
Spleen		Hematopoietic Cell Proliferation	Minimal
Testes	Seminif Tub	Atrophy	Mild
	Seminif Tub	Mineralization	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 12

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lung	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Islets, Pancreatic	Mammary Gland	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Medulla	Hyperplasia	Minimal
	Cortex	Hypertrophy	Mild
Kidney		Casts Protein	Minimal
		Congestion	Minimal
Note: CONGESTION TGLs = 5-3			
Note: MARKEDLY DISTENDED BOWMAN'S SPACE IN ONE GLOMERULUS			
Liver		Hepatocellular Adenoma	
		Hepatocellular Carcinoma	
Note: HEPATOCLR CARC TGLs = 3-2.1			
Note: HEPATOCLR ADEN TGLs = 3-2			
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hemorrhage	Minimal
	Mandibular	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
Note: SUGGESTION OF MIXED TYPE LYMPHOMA IN LYMPH NODE.			
Note: LYMPH MAL MIXD TGLs = 6-5			
Spleen		Hematopoietic Cell Proliferation	Minimal
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 2-3			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 12

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 5.0%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Liver
Lung	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 1-10			
Kidney	Cortex	Mineralization	Minimal
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Mild
	Axillary	Infiltration Cellular	Lymphocyte, Mild
Note: ANGIECTASIS TGLs = 3-5			
Preputial Gland		Necrosis	Moderate
Note: NECROSIS TGLs = 2-9			
Spleen		Hematopoietic Cell Proliferation	Mild
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 13

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

Stomach - Glandular

Urinary Bladder

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 13

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose
Pancreas	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 2-9			
Liver			
Note: PROMINENT ENDOTHELIAL CELLS			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hemangioma	
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: HEMANGIOMA TGLs = 4-5			
Pituitary Gland	Pars Distalis	Cyst	
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	Follicular Cel	Carcinoma	
Note: CARCINOMA TGLs = 3-5			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Liver	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Brain		Mineralization	Mild
Lung		Alveolar/Bronchiolar Adenoma	Multiple
Note: ALV BRON ADEN TGLs = 5-1			
Pituitary Gland	Pars Intermed	Hyperplasia	Minimal
Skin	Subcut Tiss	Fibroma	Multiple
Note: FIBROMA TGLs = 1-9,2-9			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 14

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Gallbladder  
Stomach - Glandular

Liver

Spleen

Stomach - Forestomach

**OBSERVATIONS**

Intestine Small  
Note: LYMPH MAL LYMP TGLs = 5-1

Jejunum, Lymphoid Nodul

Lymphoma Malignant Lymphocytic

Lymph Node  
Note: ANGIECTASIS TGLs = 7-3

Mesenteric

Angiectasis

Minimal

Skin  
Note: FIBROMA TGLs = 2-4

Subcut Tiss

Fibroma

Urinary Bladder

Calculus Gross Observation  
Calculus Micro Observation Only

Note: CALCUS MIC OBS TGLs = 3-3

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 14

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
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
Mammary Gland	Nose	Pancreas	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Stomach - Forestomach

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Pancreas			
Note: SUGGESTION OF ACINAR CELL HYPERPLASIA			
Pituitary Gland	Pars Distalis	Cyst	
Preputial Gland		Dilatation	Moderate
		Necrosis	Moderate
Note: NECROSIS TGLs = 4-9			
Note: DESQUAMATED MATERIAL IN LUMINA OF DUCTS			
Skin		Acanthosis	Mild
		Necrosis	Minimal
Note: SUGGESTION OF FIBROMA NEAR ARROW			
Note: ACANTHOSIS TGLs = 2-9			
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Nose	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS	TGLs = 2-10		
Lung		Alveolar/Bronchiolar Adenoma	
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS	TGLs = 4-5		
Skin	Subcut Tiss	Fibrosarcoma	
	Epithelium, Scrotal	Hyperplasia	Basal Cell, Mild
		Necrosis	Minimal
Note: HYPERPLASIA	TGLs = 3-9		
Note: FIBROSARC	TGLs = 1-9		
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 15	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Esophagus	Stomach - Forestomach	Stomach - Glandular	Trachea
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**OBSERVATIONS**

Bone [ Hyperostosis TGLS = 2-4 ]	Tarsal	Hyperostosis	Moderate
Lung Note: TUMOR EMBOLI IN BRONCHIOLES [ Infiltration Cellular TGLS = 5-2 ]		Alveolar/Bronchiolar Carcinoma Infiltration Cellular	Histiocyte, Mild
Lymph Node Note: HEMA CELL PROL TGLs = 7-1	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Skin [ Inflammation TGLS = 3-3 ]		Inflammation	Acute, Mild
Urinary Bladder Note: CALCUS MIC OBS TGLs = 8-1		Calculus Gross Observation Calculus Micro Observation Only	

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 15

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pancreas  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular  
Trachea

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Pituitary Gland  
Skin  
Testes  
Urinary Bladder

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Prostate  
Spleen  
Thymus

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland  
Bone  
[ Hyperostosis TGLS = 1-9 ]  
Lung

Capsule  
Tarsal

Hyperplasia  
Hyperostosis

Alveolar/Bronchiolar Adenoma  
Infiltration Cellular

Minimal  
Mild  
Multiple  
Histiocyte, Mild

Note: ALV BRON ADEN TGLs = 2-1,3-1

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 16

TRT#: 1

SEX: Male

DAY ON TEST: 550

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Pancreas  
Seminal Vesicle  
Thymus

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Islets, Pancreatic  
Pituitary Gland  
Stomach - Forestomach  
Thyroid Gland

Bone Marrow  
Gallbladder  
Intestine Small - Duodenum  
Lymph Node - Mesenteric  
Prostate  
Stomach - Glandular  
Trachea

Brain  
Heart  
Intestine Small - Ileum  
Nose  
Salivary Glands  
Testes  
Urinary Bladder

MISSING

Intestine Large - Rectum

Lymph Node - Mandibular

Mammary Gland

Parathyroid Gland

OBSERVATIONS

Bone  
[ Hyperostosis TGLS = 6-11 ]  
Kidney  
Note: CONGESTION TGLs = 3-4  
Liver

Tarsal

Hyperostosis

Moderate

Lung  
Note: CONGESTION TGLs = 5-1

Congestion

Mild

Preputial Gland

Fatty Change  
Hepatocellular Adenoma  
Congestion

Focal, Mild

Skin

Subcut Tiss

Inflammation  
Fibrosarcoma

Chronic Active, Minimal

Note: THIS NEOPLASM HAS FEATURES OF A RHABDOMYOSARCOMA

Note: FIBROSARC TGLs = 1-13

Spleen

Hematopoietic Cell Proliferation

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 16	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Kidney	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Trachea	

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Moderate
[ Hyperostosis TGLs = 3-4 ]			
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 4-2		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Angiectasis	Mild
Note: ANGIECTASIS TGLs = 6-3	Mesenteric	Hematopoietic Cell Proliferation	Mild

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 16

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Harderian Gland
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	Pancreas
Pituitary Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	

MISSING

Mammary Gland	Parathyroid Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 4-9			
Kidney	Cortex	Mineralization	Minimal
Liver		Fibrosis	Minimal
		Hepatocellular Adenoma	
Note: HEPATOCLR ADEN TGLs = 5-2			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Note: ANGIECTASIS TGLs = 3-5			
Testes	Seminif Tub	Atrophy	Minimal
Urinary Bladder		Calculus Gross Observation	
		Calculus Micro Observation Only	

[ Calculus Gross Observation TGLS = 2-1 ]

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 17

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 3-11			
Liver	Bile Duct	Hepatocellular Adenoma	
		Hyperplasia	Mild
		Infarct	Moderate
		Mineralization	Mild
		Pigmentation	Mild
Note: PROLIFERATING FIBROBLASTS AND CHOLESTEROL CLEFTS			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 6-9			
Note: LYMPH MAL MIXD TGLs = 8-5			
Preputial Gland		Dilatation	Mild
Note: DILATATION TGLs = 4-9			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-10			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 17

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen

Hematopoietic Cell Proliferation

Minimal

Lymphoma Malignant Mixed

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 17

TRT#: 2

SEX: Male

DAY ON TEST: 620

DOSE: 2.5%

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Islets, Pancreatic  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Kidney  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Heart  
Lung  
Prostate  
Testes

Brain  
Intestine Large - Cecum  
Nose  
Seminal Vesicle  
Thyroid Gland

MISSING

Lymph Node - Mandibular

Mammary Gland

Parathyroid Gland

Thymus

AUTO PRECLUDES DIAG.

Gallbladder  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Lymph Node - Mesenteric

Intestine Small - Duodenum  
Salivary Glands

OBSERVATIONS

Adrenal Gland  
Bone  
    [ Hyperostosis TGLS = 5-11 ]  
Liver  
    Note: HEPATOCLR CARC TGLs = 3-3  
Skin  
    Note: INFLAMMATION TGLs = 4-9  
Spleen  
    Note: ATROPHY TGLs = 2-4

Capsule  
Tarsal  
  
Prepuce

Hyperplasia  
Hyperostosis  
  
Hepatocellular Carcinoma  
  
Inflammation  
  
Atrophy

Minimal  
Mild  
  
  
Acute, Minimal  
  
Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 17

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Heart  
Intestine Small - Duodenum  
Lung  
Pancreas  
Salivary Glands  
Testes  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Seminal Vesicle  
Thymus

Bone  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Pituitary Gland  
Stomach - Forestomach  
Thyroid Gland

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Prostate  
Stomach - Glandular  
Trachea

MISSING

Lymph Node - Mandibular

Skin

OBSERVATIONS

Adrenal Gland  
Harderian Gland  
    Note: HYPERPLASIA   TGLs = 4-7  
Kidney  
Liver  
    Note: HEPATOCLR ADEN   TGLs = 3-2  
Spleen  
    Note: FIBROSIS   TGLs = 2-3

Capsule  
  
Cortex

Hyperplasia  
Hyperplasia  
  
Mineralization  
Hepatocellular Adenoma  
  
Fibrosis  
Hematopoietic Cell Proliferation

Minimal  
Minimal  
  
Minimal  
  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 667

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 4-10			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: HEMA CELL PROL TGLs = 7-5			
Mesentery	Fat	Necrosis	Moderate
Note: NECROSIS TGLs = 6-6			
Skin	Subcut Tiss	Fibrosarcoma	Multiple
Note: FIBROSARC TGLs = 1-9,2-9			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 5-3			
Note: MEGAKARYOCYTES INCREASED IN SPLEEN & BONE MARROW			
Stomach	Forestomach	Hyperkeratosis	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 18	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 465 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Heart
Intestine Large - Colon	Islets, Pancreatic	Liver	Lung
Nose	Pancreas	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

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**MISSING**

Lymph Node - Mandibular	Mammary Gland	Pituitary Gland	
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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Stomach - Glandular	

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Mild
Lymph Node	Mesenteric	Angiectasis	Mild
Preputial Gland		Necrosis	Mild
Note: NECROSIS      TGLs = 1-11			
Spleen		Hematopoietic Cell Proliferation	Mild

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**PRIMARY CAUSE OF DEATH**      -

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 18

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Kidney	Cortex	Mineralization	Minimal
Lung		Hemorrhage	Minimal
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild

Note: ANGIECTASIS TGLs = 3-5

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	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	Nose	Pancreas
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Mild
[ Hyperostosis TGLS = 2-9 ]			
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Skin	Subcut Tiss	Fibroma	
[ Fibroma TGLS = 3-10 ]			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 19	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 698 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Harderian Gland	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Bone [ Hyperostosis TGLS = 1-4 ]	Tarsal	Hyperostosis	Moderate
Liver Note: HEPATOCLR ADEN TGLs = 7-2		Hepatocellular Adenoma	
Lymph Node Note: ANGIECTASIS TGLs = 6-2	Mesenteric Mesenteric	Angiectasis Hematopoietic Cell Proliferation	Mild Mild
Skin Note: SARCOMA TGLs = 3-3	Subcut Tiss	Sarcoma	
Spleen Note: HEMA CELL PROL TGLs = 5-2		Hematopoietic Cell Proliferation	Moderate

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 19	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
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 - Mesenteric	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Liver		Hepatocellular Adenoma	
Note: HEPATOCLR ADEN TGLs = 3-2			
Spleen		Hematopoietic Cell Proliferation	Minimal

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 20

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Lymph Node - Mandibular	Mammary Gland	Nose
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**OBSERVATIONS**

Adrenal Gland	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 3-10			
Lung		Congestion	Mild
Lymph Node	Axillary	Angiectasis	Mild
Skin	Subcut Tiss	Fibroma	Multiple
Note: FIBROMA TGLs = 1-9,2-9			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 20

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Spleen

Stomach - Forestomach

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**OBSERVATIONS**

Stomach

Glandular

Inflammation

Chronic Active, Minimal

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 20

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pancreas  
Seminal Vesicle  
Testes  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Pituitary Gland  
Skin  
Thymus

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Prostate  
Stomach - Forestomach  
Thyroid Gland

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Salivary Glands  
Stomach - Glandular  
Trachea

MISSING

Mammary Gland

Parathyroid Gland

OBSERVATIONS

Adrenal Gland  
Bone

Capsule  
Tarsal

Hyperplasia  
Hyperostosis

Minimal  
Mild

[ Hyperostosis TGLS = 2-9 ]

Lymph Node

Mesenteric  
Mesenteric

Angiectasis  
Hematopoietic Cell Proliferation

Mild  
Mild

Note: ANGIECTASIS TGLs = 4-5

Spleen  
Trachea

Hematopoietic Cell Proliferation

Mild

Note: BLOOD IN LUMEN OF TRACHEA

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 21

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lymph Node - Mandibular
Mammary Gland	Nose	Pancreas	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Stomach - Forestomach	Testes	Thymus	Trachea
Urinary Bladder			

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Note: REGRESSION OR DEGENERATION OF INNER CORTEX			
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 1-9			
Intestine Small	Ileum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 5-6			
Liver		Fatty Change	Focal, Minimal
Lung		Alveolar/Bronchiolar Adenoma	
Note: ? CARCINOMA ?			
[ Alveolar/Bronchiolar Adenoma TGLS = 4-1 ]			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 6-5			
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Glandular	Hyperplasia	Minimal
	Glandular	Inflammation	Chronic Active, Mild
Thyroid Gland	Follicular Cel	Carcinoma	
Note: CARCINOMA TGLs = 3-5			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 21

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 732

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 21	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 722 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**AUTO PRECLUDES DIAG.**

Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Mesentery [ Necrosis TGLS = 3-1 ]	Fat	Necrosis	Marked
Skin Note: FIBROSARC TGLs = 2-2	Subcut Tiss	Fibrosarcoma	

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 21                      **TRT#:** 3                      **SEX:** Male                      **DAY ON TEST:** 730  
**DOSE:** 5.0%                      **DISP:** Terminal Sacrifice                      **HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Epididymis	Esophagus
Gallbladder	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
Mammary Gland	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Brain		Mineralization	Mild
Liver		Hepatocellular Carcinoma	
		Necrosis	Moderate
Note: HEPATOCLR CARC    TGLs = 4-7			
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS    TGLs = 3-5			
Spleen		Hematopoietic Cell Proliferation	Minimal
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH                      -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 660

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Pancreas
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Testes	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Mammary Gland	Nose	Parathyroid Gland
Thymus			

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Mesentery	Fat	Necrosis	Marked
Note: NECROSIS TGLs = 2-5			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-9			
Spleen		Hematopoietic Cell Proliferation	Moderate
Thyroid Gland	Follicle	Cyst	Marked
Note: LARGE CYSTIC FOLLICLE			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 22	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 482 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Heart
Islets, Pancreatic	Liver	Lung	Nose
Pancreas	Pituitary Gland	Salivary Glands	Skin
Spleen	Stomach - Forestomach	Testes	Thyroid Gland
Trachea			

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**MISSING**

Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland	
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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Prostate
Seminal Vesicle	Stomach - Glandular	Thymus	Urinary Bladder

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Minimal
Lymph Node	Mesenteric	Angiectasis	Minimal

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**PRIMARY CAUSE OF DEATH** -

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 22	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 30 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Heart	Kidney
Liver	Nose	Pituitary Gland	Prostate
Seminal Vesicle	Testes	Trachea	

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**MISSING**

Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Urinary Bladder			

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**AUTO PRECLUDES DIAG.**

Gallbladder

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**OBSERVATIONS**

Lung	Congestion	Moderate
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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 715

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Heart
Intestine Large - Colon	Islets, Pancreatic	Liver	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Prostate	Salivary Glands	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	

MISSING

Mammary Gland

AUTO PRECLUDES DIAG.

Gallbladder	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Urinary Bladder	

OBSERVATIONS

Kidney		Inflammation	Acute, Mild
	Cortex	Mineralization	Minimal
Lung	Alveolar Epith	Hyperplasia	Minimal
Preputial Gland		Dilatation	Mild
Note: DESQUAMATED MATERIAL IN LUMINA OF DUCTS			
Note: DILATATION TGLs = 5-9			
Seminal Vesicle		Bacterium	Mild
Note: BACTERIUM TGLs = 3-4			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

<b>ANIMAL ID:</b> 23	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 655 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Colon
Intestine Small - Duodenum	Islets, Pancreatic	Lung	Nose
Pancreas	Parathyroid Gland	Penis	Pituitary Gland
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea			

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**AUTO PRECLUDES DIAG.**

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

Adrenal Gland	Capsule Cortex	Hyperplasia Hyperplasia	Mild Mild
Epididymis		Lymphoma Malignant Lymphocytic	
Kidney		Lymphoma Malignant Lymphocytic	
Liver		Hemorrhage Hepatocellular Carcinoma	Moderate
Note: HEPATOCLR CARC TGLs = 2-2			
Lymph Node	Mesenteric Mesenteric	Angiectasis Hematopoietic Cell Proliferation	Mild Mild
Prostate		Lymphoma Malignant Lymphocytic	
Salivary Glands		Lymphoma Malignant Lymphocytic	
Skin	Prepuce	Hemorrhage	Mild
Note: HEMORRHAGE TGLs = 5-5			
Spleen		Lymphoma Malignant Lymphocytic	
Note: LYMPH MAL LYMP TGLs = 1-3			
Testes		Lymphoma Malignant Lymphocytic	
Thymus		Lymphoma Malignant Lymphocytic	
Urinary Bladder		Lymphoma Malignant Lymphocytic	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 23

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 655

**DOSE:** 2.5%

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 23

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	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	Nose	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Moderate
[ Hyperostosis TGLS = 2-9 ]			
Liver		Hepatocellular Adenoma	
Note: HEPATOCLR ADEN TGLs = 4-2			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Note: ANGIECTASIS TGLs = 3-5			
Pituitary Gland	Pars Distalis	Cyst	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 601

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Pituitary Gland  
Skin  
Testes  
Urinary Bladder

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Prostate  
Spleen  
Thymus

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Pancreas  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular  
Trachea

MISSING

Mammary Gland

Preputial Gland

OBSERVATIONS

Adrenal Gland

Capsule  
Medulla

Hyperplasia  
Hyperplasia

Minimal  
Minimal

Bone

Tarsal

Hyperostosis

Marked

[ Hyperostosis TGLS = 9-11 ]

Liver

Fatty Change  
Hepatocellular Adenoma  
Hepatocellular Carcinoma

Focal, Mild

Note: HEPATOCLR CARC TGLs = 7-3

Note: NODULE WITHIN NODULE

Lymph Node

Mesenteric

Angiectasis

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 2

DOSE: 2.5%

SEX: Male

DISP: Moribund

DAY ON TEST: 656

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
Heart	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Kidney	Liver	Pancreas	Pituitary Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Mammary Gland	Nose	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Lung	[ Alveolar/Bronchiolar Adenoma TGLS = 6-1 ]	Alveolar/Bronchiolar Adenoma	
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC	TGLs = 1-9		
Spleen	[ Hematopoietic Cell Proliferation TGLS = 4-3 ]	Hematopoietic Cell Proliferation	Moderate
Testes	Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 3-4		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Bone Marrow

Brain

Epididymis

Esophagus

Gallbladder

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

Nose

Pituitary Gland

Prostate

Salivary Glands

Seminal Vesicle

Skin

Stomach - Forestomach

Stomach - Glandular

Testes

Thymus

Thyroid Gland

Trachea

Urinary Bladder

**MISSING**

Lymph Node - Mandibular

Mammary Gland

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland

Capsule

Hyperplasia

Minimal

Pancreas

Acinus

Atrophy

Minimal

Preputial Gland

Dilatation

Moderate

[ Dilatation TGLS = 2-7 ]

Spleen

Hematopoietic Cell Proliferation

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 660

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Seminal Vesicle  
Testes

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Pancreas  
Skin  
Thymus

Bone  
Heart  
Intestine Small - Duodenum  
Liver  
Pituitary Gland  
Stomach - Forestomach  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Prostate  
Stomach - Glandular  
Trachea

MISSING

Lymph Node - Mandibular

Mammary Gland

Nose

Parathyroid Gland

AUTO PRECLUDES DIAG.

Gallbladder

Salivary Glands

OBSERVATIONS

Adrenal Gland  
Brain  
Kidney  
Spleen

Capsule  
Cortex

Hyperplasia  
Mineralization  
Mineralization  
Hematopoietic Cell Proliferation

Minimal  
Mild  
Minimal  
Mild

Note: HEMA CELL PROL TGLs = 3-3

Urinary Bladder

Transit Epithe

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 25

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Stomach - Forestomach

Stomach - Glandular

**OBSERVATIONS**

Adrenal Gland

Capsule

Hyperplasia

Minimal

Bone

Tarsal

Hyperostosis

Moderate

[ Hyperostosis TGLS = 2-3 ]

Lymph Node

Mesenteric

Angiectasis

Mild

Mesenteric

Hematopoietic Cell Proliferation

Mild

Note: ANGIECTASIS TGLs = 5-2

Spleen

Hemangiosarcoma

Hematopoietic Cell Proliferation

Mild

Hemorrhage

Mild

Note: HEMANGIOSARC TGLs = 4-1

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 25

TRT#: 3

SEX: Male

DAY ON TEST: 690

DOSE: 5.0%

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Liver	Lung
Lymph Node - Mandibular	Nose	Pancreas	Pituitary Gland
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Trachea	

MISSING

Adrenal Gland - Medulla	Mammary Gland	Parathyroid Gland	Thyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Minimal
[ Hyperostosis TGLS = 1-9 ]			
Kidney	Papilla	Inflammation	Acute, Moderate
		Necrosis	Minimal
Note: TRACT INFLAMMATION.			
Note: INFLAMMATION TGLs = 5-3			
Note: PROBABLE PYELONEPHRITIS AND/OR UPPER URINARY			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Moderate
Preputial Gland		Dilatation	Mild
Note: DILATATION TGLs = 2-7			
Note: DESQUAMATED MATERIAL IN DUCTS			
Prostate		Inflammation	Chronic Active, Mild
Spleen		Depletion Lymphoid	Moderate
Thymus		Depletion Lymphoid	Moderate
Urinary Bladder		Inflammation	Chronic Active, Mild
		Mineralization	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 26

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mesenteric	Mammary Gland	Thymus	
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Islets, Pancreatic		Hyperplasia	Mild
Liver		Hepatocellular Adenoma	Multiple
Note: HEPATOCLR ADEN TGLs = 4-2.1			
Lung		Alveolar/Bronchiolar Adenoma	
		Alveolar/Bronchiolar Carcinoma	
Note: ALV BRON CARC TGLs = 2-1			
Mesentery	Fat	Mineralization	Minimal
	Fat	Necrosis	Moderate
Note: NECROSIS TGLs = 3-9			
Spleen		Angiectasis	Mild
		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 26	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Intestine Small

Jejunum, Lymphoid Nodul

Hyperplasia

Moderate

Note: HYPERPLASIA TGLs = 3-1

Mesentery

Fat

Mineralization

Moderate

Fat

Necrosis

Marked

[ Necrosis TGLs = 2-1 ]

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 26

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone Marrow	Brain	Epididymis	Esophagus
Gallbladder	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	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
	Medulla	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Mild
	[ Hyperostosis TGLS = 3-9 ]		
Kidney	Papilla	Mineralization	Minimal
Lung	Alveolar Epith	Hyperplasia	Mild
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS	TGLs = 6-5		
Preputial Gland		Necrosis	Mild
Note: NECROSIS	TGLs = 4-10		
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA	TGLs = 1-10		
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 27

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
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	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Minimal
Lung		Alveolar/Bronchiolar Adenoma	
		Hemorrhage	Mild
	Alveolar Epith	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 5-1		
Note: ALV BRON ADEN	TGLs = 4-1		
Preputial Gland		Inflammation	Chronic Active, Mild
Skin		Necrosis	Moderate
Note: PREPUCE COULD NOT BE IDENTIFIED.			
Note: NECROSIS	TGLs = 2-9		
Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 27

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Preputial Gland

Spleen

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Bone

Tarsal

Hyperostosis

Moderate

[ Hyperostosis TGLS = 1-2 ]

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 27

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Salivary Glands  
Stomach - Glandular  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Kidney  
Pancreas  
Seminal Vesicle  
Testes  
Urinary Bladder

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Liver  
Pituitary Gland  
Skin  
Thymus

Brain  
Heart  
Intestine Small - Duodenum  
Lung  
Prostate  
Stomach - Forestomach  
Thyroid Gland

MISSING

Mammary Gland

Parathyroid Gland

OBSERVATIONS

Bone  
[ Hyperostosis TGLS = 1-9 ]

Tarsal

Hyperostosis

Mild

Intestine Small  
Note: HYPERPLASIA TGLs = 5-6

Ileum, Lymphoid Nodul  
Jejunum, Lymphoid Nodul

Hyperplasia  
Hyperplasia

Moderate  
Mild

Lymph Node  
Nose  
Preputial Gland  
Note: NECROSIS TGLs = 4-7

Mesenteric

Hematopoietic Cell Proliferation  
Inflammation  
Necrosis

Mild  
Acute, Minimal  
Moderate

Spleen

Hematopoietic Cell Proliferation

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 28

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Esophagus	Mammary Gland	Nose
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone Marrow			
Note: MEGAKARYOCYTES INCREASED			
Intestine Small	Ileum, Lymphoid Nodul	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 3-6			
Liver		Eosinophilic Focus	
Note: HEPATOCLR CARC TGLs = 6-2.1			
Mesentery		Inflammation	Acute, Moderate
Preputial Gland		Dilatation	Mild
		Necrosis	Mild
Note: NECROSIS TGLs = 1-2			
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 28

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Stomach - Forestomach

Stomach - Glandular

**OBSERVATIONS**

Bone	Tarsal	Hyperostosis	Moderate
	Synovial Tiss	Sarcoma	
Note: HYPEROSTOSIS TGLs = 2-3			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Note: ANGIECTASIS TGLs = 5-2			
Preputial Gland		Dilatation	Mild
Note: DILATATION TGLs = 3-2			
Skin		Necrosis	Minimal
Note: NECROSIS TGLs = 6-9			
Spleen		Hemangiosarcoma	
		Hematopoietic Cell Proliferation	Mild
		Hemorrhage	Mild
Note: HEMANGIOSARC TGLs = 4-1			

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 28

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Prostate  
Spleen  
Thymus

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Seminal Vesicle  
Stomach - Glandular  
Trachea

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pancreas  
Skin  
Testes  
Urinary Bladder

**MISSING**

Mammary Gland

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hypertrophy  
Hyperostosis

Marked  
Minimal  
Minimal

Bone

Note: HYPEROSTOSIS TGLs = 3-9

Tarsal

Intestine Large

Note: NECROSIS TGLs = 2-6

Anus

Necrosis

Mild

Lymph Node

Mesenteric

Angiectasis

Mild

Pituitary Gland

Pars Intermed

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 695

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Heart  
Islets, Pancreatic  
Pancreas  
Salivary Glands  
Testes  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Cecum  
Kidney  
Parathyroid Gland  
Seminal Vesicle  
Thymus

Bone  
Esophagus  
Intestine Large - Rectum  
Lung  
Pituitary Gland  
Stomach - Forestomach  
Thyroid Gland

Bone Marrow  
Gallbladder  
Intestine Small - Duodenum  
Nose  
Prostate  
Stomach - Glandular  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland  
Intestine Large  
Intestine Small

Capsule  
Colon, Lymphoid Nodul  
Ileum, Lymphoid Nodul  
Jejunum, Lymphoid Nodul

Hyperplasia  
Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed

Minimal

Note: LYMPH MAL MIXD TGLs = 6-6

Kidney

Note: INCREASED CELLULARITY IN MANY GLOMERULI

Liver

Hemangiosarcoma  
Hematopoietic Cell Proliferation  
Necrosis

Mild  
Moderate

Note: NECROSIS TGLs = 12-2+2.1

Note: HEMANGIOSARC TGLs = 9-2+2.1,10-2+2.1,11-2+2.1

Lymph Node

Mandibular, Pancreatic  
Mesenteric

Hemangiosarcoma  
Lymphoma Malignant Mixed

Metastatic (Uncertain Primary Site)

Note: LYMPH MAL MIXD TGLs = 7-5

Note: HYALINE MATERIAL BOTH IN MESENTERIC AND MANDIBULAR

Note: LYMPH NODES. THIS MATERIAL STAINS SLIGHTLY WITH

Note: PAS BUT NOT WITH CONGO RED. A FEW PAS POSITIVE

Note: MACROPHAGES

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 29

**TRT#:** 1  
**DOSE:** CONTROL

**SEX:** Male  
**DISP:** Moribund

**DAY ON TEST:** 695  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Skin		Subcut Tiss	Hemangiosarcoma	
Note: HEMANGIOSARC	TGLs = 1-10			
Spleen			Hematopoietic Cell Proliferation	Mild
			Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 5-3			
PRIMARY CAUSE OF DEATH		-		

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 29	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach	Stomach - Glandular	Trachea	Urinary Bladder
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**OBSERVATIONS**

Bone	Joint	Hyperostosis	Moderate
	Tarsal	Hyperostosis	Marked
Note: HYPEROSTOSIS TGLs = 2-3,6-4			
Intestine Small	Ileum, Lymphoid Nodul	Hyperplasia	Moderate
Note: HYPERPLASIA TGLs = 5-1			
Lung		Alveolar/Bronchiolar Adenoma	
		Hemorrhage	Mild
Note: ALV BRON ADEN TGLs = 4-2			

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 29	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Adrenal Gland - Medulla	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	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	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Mild
[ Hyperostosis TGLS = 3-9 ]			
Skin			

Note: SKIN SECTION ON SLIDE #5 APPEARS NORMAL

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 30	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Liver	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Testes	Thyroid Gland	Trachea	Urinary Bladder

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**MISSING**

Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Brain		Mineralization	Minimal
Islets, Pancreatic		Hyperplasia	Mild
Note: A FEW LARGE ISLETS			
Kidney	Cortex	Mineralization	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 30

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Bone

Tarsal

Hyperostosis

Mild

Note: HYPEROSTOSIS TGLs = 1-2

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 30

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Parathyroid Gland	Thymus	
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney		Congestion	Mild
	Cortex	Mineralization	Minimal
Note: CONGESTION TGLs = 6-3			
Liver		Cyst	
Note: CYST TGLs = 7-2			
Lung		Alveolar/Bronchiolar Adenoma	Multiple
		Alveolar/Bronchiolar Carcinoma	
		Hemorrhage	Minimal
		Infiltration Cellular	Histiocyte, Moderate
Note: ALV BRON ADEN TGLs = 4-1			
Note: ALV BRON CARC TGLs = 5-2			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 585

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone Marrow	Brain	Epididymis	Esophagus
Gallbladder	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	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Mammary Gland
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OBSERVATIONS

Bone Note: HYPEROSTOSIS TGLs = 8-11	Tarsal	Hyperostosis	Moderate
Lymph Node	Mesenteric	Angiectasis	Mild
	Lumbar	Hematopoietic Cell Proliferation	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
	Renal	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS TGLs = 5-6			
Note: HEMA CELL PROL TGLs = 6-12,7-12			
Skin	Subcut Tiss	Fibrosarcoma	
		Necrosis	Moderate
Note: FIBROSARC TGLs = 2-13+13.1			
Spleen		Hematopoietic Cell Proliferation	Moderate
[ Hematopoietic Cell Proliferation TGLs = 4-4 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31	TRT#: 2 DOSE: 2.5%	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 731 HISTO:
<b>OBSERVATIONS</b>			
Bone [ Hyperostosis TGLS = 2-4 ]	Tarsal	Hyperostosis	Moderate
Harderian Gland Note: ADENOMA TGLs = 8-2		Adenoma	
Intestine Small Note: LYMPH MAL MIXD TGLs = 7-2	Ileum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Lymph Node  Note: LYMPH MAL MIXD TGLs = 4-1,6-5	Mesenteric Mesenteric Pancreatic Renal	Angiectasis Lymphoma Malignant Mixed Lymphoma Malignant Mixed Lymphoma Malignant Mixed	Minimal
Spleen  Note: LYMPH MAL MIXD TGLs = 3-1		Hematopoietic Cell Proliferation Lymphoma Malignant Mixed	Mild
Stomach  Note: ACANTHOSIS TGLs = 9-1	Forestomach Forestomach Glandular Forestomach	Acanthosis Hyperkeratosis Inflammation Squamous Cell Papilloma	Mild Mild Chronic Active, Mild
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31

TRT#: 3

SEX: Male

DAY ON TEST: 694

DOSE: 5.0%

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Pancreas  
Prostate  
Stomach - Glandular  
Trachea

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Parathyroid Gland  
Salivary Glands  
Testes

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Lymph Node - Mesenteric  
Pituitary Gland  
Seminal Vesicle  
Thymus

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Nose  
Preputial Gland  
Stomach - Forestomach  
Thyroid Gland

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hypertrophy

Mild  
Mild

Bone

Tarsal

Hyperostosis

Moderate

Note: HYPEROSTOSIS TGLs = 4-9

Skin

Subcut Tiss

Hemangiosarcoma  
Necrosis

Moderate

Note: HEMANGIOSARC TGLs = 1-10

Note: NECROSIS TGLs = 2-10

Spleen

Hematopoietic Cell Proliferation

Minimal

Urinary Bladder

Calculus Micro Observation Only

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 32	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
Heart	Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Liver	Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea		

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**MISSING**

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

Adrenal Gland	Capsule	Hyperplasia	Minimal
Urinary Bladder		Calculus Micro Observation Only	

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 32

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Bone	Preputial Gland	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Intestine Small Note: HYPERPLASIA TGLs = 4-1	Jejunum, Lymphoid Nodul	Hyperplasia	Moderate
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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 32

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Harderian Gland		Adenoma	
[ Adenoma TGLS = 7-9 ]			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mandibular	Hematopoietic Cell Proliferation	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS TGLs = 6-5			
Mesentery	Fat	Necrosis	Moderate
Note: NECROSIS TGLs = 5-6			
Preputial Gland		Dilatation	Moderate
		Inflammation	Chronic Active, Minimal
[ Inflammation TGLS = 3-10 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 564

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Liver	Lung	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Marked
Note: HYPEROSTOSIS TGLs = 4-12			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Moderate
Note: ANGIECTASIS TGLs = 3-6			
Skin	Subcut Tiss	Fibrosarcoma	
		Hemorrhage	Mild
Note: FIBROSARC TGLs = 1-11			
Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 33	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Islets, Pancreatic	Lymph Node - Mesenteric	Pancreas	Skin
Stomach - Forestomach	Stomach - Glandular		

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**OBSERVATIONS**

Bone Note: HYPEROSTOSIS TGLs = 3-4	Tarsal	Hyperostosis	Marked
Liver Note: HEPATOCLR ADEN TGLs = 8-2		Hepatocellular Adenoma	
Lymph Node Note: CYST TGLs = 7-2 Note: ANGIECTASIS TGLs = 4-1	Pancreatic Iliac	Angiectasis Cyst	Moderate
Urinary Bladder [ Calculus Gross Observation TGLS = 9-5 ]		Calculus Gross Observation Calculus Micro Observation Only	

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**PRIMARY CAUSE OF DEATH** -

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 33

TRT#: 3

SEX: Male

DAY ON TEST: 564

DOSE: 5.0%

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Pituitary Gland  
Stomach - Forestomach  
Thyroid Gland

Adrenal Gland - Medulla  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Prostate  
Stomach - Glandular  
Trachea

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Salivary Glands  
Testes  
Urinary Bladder

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pancreas  
Seminal Vesicle  
Thymus

MISSING

Lymph Node - Mandibular

Parathyroid Gland

OBSERVATIONS

Adrenal Gland  
Bone

Capsule  
Tarsal

Hyperplasia  
Hyperostosis

Minimal  
Marked

[ Hyperostosis TGLS = 3-12 ]

Brain  
Lymph Node

Mesenteric  
Mesenteric  
Subcut Tiss

Mineralization  
Angiectasis  
Hematopoietic Cell Proliferation  
Fibrosarcoma

Mild  
Mild  
Mild

Skin  
Note: FIBROSARC TGLs = 1-11

Spleen  
Urin Bladder

Hematopoietic Cell Proliferation

Mild

Note: BLOOD IN LUMEN OF BLADDER

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

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

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Moderate
Note: HYPEROSTOSIS TGLs = 3-11			
Skin		Basal Cell Adenoma	
	Subcut Tiss	Fibrosarcoma	Multiple
	Subcut Tiss	Mineralization	Mild
Note: FIBROSARC TGLs = 1-9			
Note: FIBROSARC TGLs = 2-10			
Note: LESION ON SLIDE #10 IS MORE LIKE RHABDOMYOSARCOMA			
Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

---

**ANIMAL ID:** 34

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Stomach - Glandular

---

**OBSERVATIONS**

Skin	Subcut Tiss	Neurofibrosarcoma	Multiple
Note: NEUROFIBROSARC	TGLs = 1-2,2-3		
Stomach	Forestomach	Inflammation	Chronic Active, Minimal

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 34

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Bone	Tarsal	Hyperostosis	Mild
[ Hyperostosis TGLS = 3-9 ]			
Bone Marrow			
Note: MEGAKARYOCYTES INCREASED			
Intestine Small	Ileum, Lymphoid Nodul	Hyperplasia	Moderate
Note: HYPERPLASIA TGLs = 6-6			
Liver		Hepatocellular Carcinoma	
Note: HEPATOCLR CARC TGLs = 7-2,8-2.1			
Preputial Gland		Dilatation	Mild
Note: DILATATION TGLs = 4-2.1			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 35

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Testes	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Lymph Node - Mandibular	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Liver		Hepatocellular Carcinoma	
Note: HEPATOCLR CARC TGLs = 4-2			
Lung		Alveolar/Bronchiolar Adenoma	
[ Alveolar/Bronchiolar Adenoma TGLS = 5-1 ]			
Nose		Inflammation	Acute, Minimal
Pancreas	Acinus	Necrosis	Minimal
Skin	Subcut Tiss	Fibrosarcoma	
		Necrosis	Mild
Note: FIBROSARC TGLs = 1-9			
Spleen		Hematopoietic Cell Proliferation	Moderate
[ Hematopoietic Cell Proliferation TGLS = 3-3 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 35

**TRT#:** 2  
**DOSE:** 2.5%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

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**OBSERVATIONS**

Liver Note: HEPATOCLR ADEN TGLs = 4-2		Hepatocellular Adenoma	
Lymph Node Note: ANGIECTASIS TGLs = 5-2	Mesenteric Mesenteric	Angiectasis Hemangioma	Mild
Preputial Gland Note: NECROSIS TGLs = 3-1		Necrosis	Mild
Skin Note: NECROSIS TGLs = 1-1		Necrosis	Mild
Stomach	Forestomach Glandular	Hyperkeratosis Inflammation	Mild Chronic Active, Minimal

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 35

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Large - Rectum

OBSERVATIONS

Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	
	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 8-7			
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
Bone	Tarsal	Hyperostosis	Minimal
[ Hyperostosis TGLS = 3-9 ]			
Skin	Subcut Tiss	Fibrosarcoma	
		Necrosis	Mild
Note: PENIS AND PREPUCE APPEAR NORMAL			
Note: FIBROSARC TGLs = 2-2			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 6-3			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:12  
First Dose M/F: NA / NA  
Lab: TSI MASON

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Heart

MISSING

Mammary Gland

AUTO PRECLUDES DIAG.

Adrenal Gland - Cortex

Brain

Intestine Large - Cecum

Intestine Small - Ileum

Liver

Nose

Prostate

Spleen

Thymus

Adrenal Gland - Medulla

Epididymis

Intestine Large - Colon

Intestine Small - Jejunum

Lung

Pancreas

Salivary Glands

Stomach - Forestomach

Thyroid Gland

Bone

Esophagus

Intestine Large - Rectum

Islets, Pancreatic

Lymph Node - Mandibular

Parathyroid Gland

Seminal Vesicle

Stomach - Glandular

Trachea

Bone Marrow

Gallbladder

Intestine Small - Duodenum

Kidney

Lymph Node - Mesenteric

Pituitary Gland

Skin

Testes

Urinary Bladder

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 36	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Bone Note: HYPEROSTOSIS TGLs = 2-3	Tarsal	Hyperostosis	Mild
Kidney Note: ADENOMA TGLs = 5-2	Renal Tubule	Adenoma	
Lymph Node Note: LYMPH MAL MIXD TGLs = 4-2	Mesenteric Mesenteric	Angiectasis Lymphoma Malignant Mixed	Mild
Preputial Gland Note: MORE LIKE INFILTRATE THAN INFLAMMATION Note: INFLAMMATION TGLs = 3-1		Inflammation	Chronic Active, Mild

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**PRIMARY CAUSE OF DEATH** -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 36

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 730

**DOSE:** 5.0%

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Bone Marrow

Brain

Epididymis

Esophagus

Gallbladder

Heart

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Islets, Pancreatic

Liver

Lung

Lymph Node - Mandibular

Lymph Node - Mesenteric

Nose

Pancreas

Parathyroid Gland

Pituitary Gland

Prostate

Salivary Glands

Seminal Vesicle

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Testes

Thymus

Thyroid Gland

Trachea

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland

Capsule

Hyperplasia

Minimal

Kidney

Cortex

Mineralization

Minimal

Urinary Bladder

Calculus Gross Observation

Calculus Micro Observation Only

[ Calculus Gross Observation TGLS = 2-1 ]

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone Marrow	Brain	Epididymis	Esophagus
Gallbladder	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	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex	Accessory Adrenal Cortical Nodule	
	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
Bone	Tarsal	Hyperostosis	Mild
[ Hyperostosis TGLS = 1-9 ]			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Note: ANGIECTASIS TGLs = 3-5			
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Acanthosis	Minimal
Note: ACANTHOSIS TGLs = 5-3			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 37	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Islets, Pancreatic	Pancreas	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Bone [ Hyperostosis TGLS = 2-3 ]	Tarsal	Hyperostosis	Marked
Liver Note: HEPATOCLR ADEN TGLs = 7-2		Hepatocellular Adenoma	
Lymph Node Note: ANGIECTASIS TGLs = 6-2	Mesenteric Mesenteric	Angiectasis Hematopoietic Cell Proliferation	Marked Mild
Preputial Gland Note: INFLAMMATION TGLs = 3-1 Note: NUMEROUS PLASMA CELLS		Inflammation	Chronic Active, Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 37

**TRT#:** 3  
**DOSE:** 5.0%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone Marrow	Brain	Epididymis	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Lung	Mammary Gland
Nose	Pancreas	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea			

**MISSING**

Lymph Node - Mandibular	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Minimal
[ Hyperostosis TGLS = 2-9 ]			
Liver		Clear Cell Focus	
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Preputial Gland		Necrosis	Mild
Note: NECROSIS TGLs = 3-10			
Spleen		Hematopoietic Cell Proliferation	Mild
Urinary Bladder		Calculus Micro Observation Only	

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 38	<b>TRT#:</b> 1 <b>DOSE:</b> CONTROL	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Spleen
Stomach - Glandular	Testes	Thymus	Trachea
Urinary Bladder			

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**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Minimal
[ Hyperostosis TGLS = 1-9 ]			
Stomach	Forestomach	Acanthosis	Minimal
	Forestomach	Hyperkeratosis	Mild
Note: HYPERKERATOSIS TGLs = 4-3			
Thyroid Gland	Follicular Cel	Adenoma	

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 38	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 691 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Bone [ Hyperostosis TGLS = 1-2 ]	Tarsal	Hyperostosis	Marked
Preputial Gland [ Inflammation TGLS = 2-1 ]		Inflammation	Chronic Active, Moderate

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 38

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Bone Marrow			
Note: MEGAKARYOCYTES INCREASED			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-9			
Note: THIS IS EITHER A FIBRO- OR NEUROFIBRO-SARCOMA			
Note: MASS IS ADJACENT TO RIBS AND IS IN THE SUB CUTIS			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 39

TRT#: 1

SEX: Male

DAY ON TEST: 623

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Nose	Pancreas	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Testes
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Heart		Fibrosarcoma	Metastatic (Skin)
Liver		Fibrosarcoma	Metastatic (Skin)
Note: FIBROSARC	TGLs = 6-3,7-3,8-3,9-3		
Lung		Edema	Mild
		Fibrosarcoma	Metastatic (Skin)
		Hemorrhage	Moderate
		Infiltration Cellular	Histiocyte, Minimal
Note: FIBROSARC	TGLs = 2-1		
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS	TGLs = 3-6		
Skin	Subcut Tiss	Fibrosarcoma	
Note: THIS NEOPLASM HAS MANY OF THE FEATURES OF A			
Note: NEUROFIBROSARCOMA.			
[ Fibrosarcoma TGLS = 1-11 ]			
Spleen		Fibrosarcoma	Metastatic (Skin)
		Hematopoietic Cell Proliferation	Moderate
Note: FIBROSARC	TGLs = 4-4		
Stomach	Glandular	Mineralization	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 39

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 623

**DOSE:** CONTROL

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thymus

Atrophy

Moderate

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 39

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

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**OBSERVATIONS**

Stomach

Glandular

Inflammation

Chronic Active, Mild

Note: INFLAMMATION TGLs = 2-1

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

<b>ANIMAL ID:</b> 39	<b>TRT#:</b> 3 <b>DOSE:</b> 5.0%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 182 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
<b>NORMAL</b>			
Bone	Brain	Epididymis	Heart
Liver	Pituitary Gland	Skin	Testes
<b>MISSING</b>			
Adrenal Gland - Cortex	Adrenal Gland - Medulla	Gallbladder	Mammary Gland
Parathyroid Gland	Thymus		
<b>AUTO PRECLUDES DIAG.</b>			
Bone Marrow	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Prostate	Salivary Glands	Seminal Vesicle
Spleen	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		
<b>OBSERVATIONS</b>			
Kidney	Cortex	Mineralization	Minimal
Lung		Congestion	Mild
<b>PRIMARY CAUSE OF DEATH</b>	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Thyroid Gland

Adrenal Gland - Medulla  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Pituitary Gland  
Skin  
Trachea

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pancreas  
Salivary Glands  
Testes

MISSING

Esophagus

Mammary Gland

Thymus

OBSERVATIONS

Adrenal Gland  
Bone

Capsule  
Tarsal

Hyperplasia  
Hyperostosis

Minimal  
Moderate

Note: HYPEROSTOSIS TGLs = 1-9

Liver

Note: CLUSTERS OF LYMPHOCYTES IN A SMALL AREA

Lymph Node  
Preputial Gland

Mesenteric

Angiectasis  
Dilatation  
Mineralization  
Necrosis

Minimal  
Mild  
Mild  
Mild

Note: NECROSIS TGLs = 2-10

Spleen  
Stomach

Glandular

Hematopoietic Cell Proliferation  
Inflammation

Minimal  
Chronic Active, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 40	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Preputial Gland	Stomach - Glandular
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**OBSERVATIONS**

Liver		Cyst	
Note: CYST	TGLs = 4-2		
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS	TGLs = 3-2		
Stomach	Forestomach	Hyperkeratosis	Minimal
Urinary Bladder		Calculus Gross Observation	
		Calculus Micro Observation Only	
Note: CALCUS MIC OBS	TGLs = 5-1		

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 40

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Lung	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Moderate
Note: PROBABLE CORTICAL HYPERTROPHY IN THE SECTION CIRCLED.			
Liver		Cyst	
Note: CYST	TGLs = 7-2		
Lymph Node	Mesenteric	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 5-5		
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-3		
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 41

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Bone

Tarsal

Hyperostosis

Minimal

Note: HYPEROSTOSIS TGLs = 1-2

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 41

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Kidney			
Note: A FEW LYMPHOCYTIC CLUSTERS OR ARE THEY INFILTRATES ?			
Preputial Gland		Inflammation	Chronic Active, Minimal
Skin	Prepuce	Fibrosis	Mild
	Prepuce	Necrosis	Mild
Note: NECROSIS TGLs = 1-9,4-9			
Spleen		Hematopoietic Cell Proliferation	Mild
Urin Bladder			
Note: URINARY BLADDER DISTENDED. BRICK RED MATERIAL AND			
Note: FEW SPERMATOOZOA ON THE SEROSAL SURFACE			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 578

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
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	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Pituitary Gland
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OBSERVATIONS

Kidney		Lymphoma Malignant Mixed	
Lung		Atelectasis	Mild
		Lymphoma Malignant Mixed	
Note: METASTATIC TUMOR IN TWO AREAS			
Lymph Node	Lumbar	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 2-2.1,4-6,5-11,6-11,7-11,8-11			
Note: LYMPHADENOPATHY			
Note: MORE LIKE ANGIO-IMMUNOBLASTIC			
Spleen		Hematopoietic Cell Proliferation	Minimal
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 3-4			
Thymus		Lymphoma Malignant Mixed	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:12  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 42	TRT#: 2 DOSE: 2.5%	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 731 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Skin	Stomach - Forestomach	Stomach - Glandular	Trachea
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OBSERVATIONS

Bone Note: HYPEROSTOSIS TGLs = 3-3	Tarsal	Hyperostosis	Minimal
Lung Note: ALV BRON CARC TGLs = 6-2		Alveolar/Bronchiolar Carcinoma Infiltration Cellular	Histiocyte, Minimal
Preputial Gland [ Dilatation TGLS = 5-1 ]		Dilatation Inflammation	Mild Chronic Active, Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 42

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Moderate
	Cortex	Hypertrophy	Moderate
Bone	Tarsal	Hyperostosis	Minimal
[ Hyperostosis TGLS = 1-9 ]			
Gallbladder	Note: PAPILLARY INGROWTH OF EPITHELIUM IN AN AREA		
Lung	Alveolar/Bronchiolar Adenoma		
[ Alveolar/Bronchiolar Adenoma TGLS = 2-1 ]			
Lymph Node	Mesenteric	Angiectasis	Minimal
Stomach	Glandular	Inflammation	Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Lymph Node - Mandibular	Nose	Thymus
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Minimal
Liver		Ito Cell Tumor Benign	
Note: ITO CL TM BGN TGLs = 4-2			
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 5-1			
Lymph Node	Mesenteric	Angiectasis	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 43

TRT#: 2

DOSE: 2.5%

SEX: Male

DISP: Moribund

DAY ON TEST: 600

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone Marrow	Brain	Epididymis	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Kidney	Lymph Node - Mandibular	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Intestine Large - Rectum	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hypertrophy	Mild
	Medulla	Pheochromocytoma Benign	
Bone	Tarsal	Hyperostosis	Minimal
[ Hyperostosis TGLS = 5-11 ]			
Liver		Hepatocellular Adenoma	
[ Necrosis TGLS = 4-3 ]		Necrosis	Minimal
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 2-1			
Lymph Node	Mesenteric	Angiectasis	Mild
Note: ANGIECTASIS TGLs = 3-6			
Skin		Necrosis	Mild
Note: NECROSIS TGLs = 1-12			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 43

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
Heart	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Kidney	Nose	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Glandular
Testes	Trachea	Urinary Bladder	

MISSING

Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland	Stomach - Forestomach
Thymus			

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Liver		Lymphoma Malignant Mixed	
		Mixed Cell Focus	
Note: LYMPH MAL MIXD TGLs = 10-2			
Lung		Alveolar/Bronchiolar Carcinoma	
		Infiltration Cellular	Histiocyte, Mild
Note: MORE AN ADENOCARCINOMA			
Note: ALV BRON CARC TGLs = 2-1.1			
Lymph Node	Lumbar	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 6-5,7-5.1,9-9			
Pituitary Gland	Pars Distalis	Cyst	
Preputial Gland		Dilatation	Moderate
Note: DILATATION TGLs = 1-9			
Note: DESQUAMATED MATERIAL IN DUCTS			
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 5-3			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 43

**TRT#:** 3  
**DOSE:** 5.0%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Thyroid Gland

Follicular Cel

Adenoma

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lung	Lymph Node - Mesenteric
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hypertrophy	Minimal
Islets, Pancreatic		Hyperplasia	Mild
Kidney	Cortex	Mineralization	Minimal
Liver		Fatty Change	Focal, Minimal
		Hepatocellular Adenoma	
		Mixed Cell Focus	
Note: HEPATOCLR ADEN TGLs = 2-2			
Preputial Gland		Necrosis	Mild
Note: NECROSIS TGLs = 1-9			
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Inflammation	Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 44

TRT#: 2

DOSE: 2.5%

SEX: Male

DISP: Moribund

DAY ON TEST: 655

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
Bone Marrow			
Note: MEGAKARYOCYTES INCREASED			
Heart		Carcinoma	Metastatic (Lung)
Note: CARCINOMA TGLs = 6-2			
Liver		Angiectasis	Mild
		Hepatocellular Carcinoma	
Note: HEPATOCLR CARC TGLs = 4-2+9			
Lung	Mediastinum	Carcinoma	Metastatic (Lung)
		Carcinoma	
Note: THIS NEOPLASM HAS MANY OF THE FEATURES OF A CARCINO-			
Note: SARCOMA RATHER THAN EITHER OF THE 2 COMPONENTS			
Note: CARCINOMA TGLs = 2-1			
Note: CARCINOMA TGLs = 5-9+10			
Lymph Node	Mediastinal	Carcinoma	Metastatic (Lung)
Note: CARCINOMA TGLs = 3-5			
Preputial Gland		Necrosis	Mild
Note: NECROSIS TGLs = 1-9			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:12

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 44

**TRT#:** 2

**DOSE:** 2.5%

**SEX:** Male

**DISP:** Moribund

**DAY ON TEST:** 655

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen

Hematopoietic Cell Proliferation

Mild

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 44

**TRT#:** 3  
**DOSE:** 5.0%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Epididymis
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Islets, Pancreatic
Kidney	Liver	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Mild
[ Hyperostosis TGLS = 2-10 ]			
Bone Marrow			
Note: MEGAKARYOCYTES INCREASED			
Brain		Mineralization	Minimal
Intestine Small	Ileum, Lymphoid Nodul	Hyperplasia	Moderate
	Jejunum, Lymphoid Nodul	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 5-6			
Islets Panc			
Note: A FEW LARGE ISLETS			
Lung		Hemorrhage	Minimal
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS TGLs = 6-5			
Mesentery	Fat	Mineralization	Mild
	Fat	Necrosis	Moderate
Note: NECROSIS TGLs = 4-9			
Preputial Gland		Dilatation	Moderate
		Necrosis	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:12  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 44

**TRT#:** 3  
**DOSE:** 5.0%

**SEX:** Male  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: DILATATION      TGLs = 3-9

Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Glandular	Inflammation	Chronic Active, Minimal

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:12

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 456

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
Heart	Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Lymph Node - Mesenteric	Nose	Pancreas	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Intestine Large - Rectum	Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Harderian Gland		Adenoma	
[ Adenoma TGLS = 4-11 ]			
Liver		Cyst	
Note: CYST TGLs = 3-3		Fatty Change	Focal, Minimal
Lung		Hemorrhage	Minimal
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-12+12.1			
Note: MORE LIKE SMOOTH MUSCLE TUMOR			
Note: FIBROSARC TGLs = 2-11			
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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<b>ANIMAL ID:</b> 45	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 269 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Heart
Intestine Large - Colon	Islets, Pancreatic	Liver	Lung
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Testes	Trachea	Urinary Bladder

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**MISSING**

Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Parathyroid Gland	Thymus	Thyroid Gland	

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**AUTO PRECLUDES DIAG.**

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

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Kidney	Cortex	Mineralization	Minimal

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 45

TRT#: 3

SEX: Male

DAY ON TEST: 682

DOSE: 5.0%

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 1-9		
Lung		Alveolar/Bronchiolar Carcinoma	
		Hemorrhage	Mild
Note: TUMOR CELLS IN LUMINA OF 3 BRONCHIOLES			
Spleen		Angiectasis	Minimal
		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 600

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lung	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Esophagus	Lymph Node - Mandibular
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 6-11			
Lymph Node	Mesenteric	Angiectasis	Moderate
	Mesenteric	Hematopoietic Cell Proliferation	Mild
Note: ANGIECTASIS TGLs = 4-6			
Skin	Subcut Tiss	Sarcoma	
Note: CONSIDERED AS A POORLY DIFFERENTIATED SARCOMA			
Note: RATHER THAN A FIBROSARCOMA.			
Note: SARCOMA TGLs = 1-12			
Note: TIONS, IF ANY, ARE NOT DISCERNABLE IN THE SECTION			
Note: NEOPLASM IN THE SUB CUTIS CONSISTS OF A			
Note: MODERATELY PLEOMORPHIC POPULATION OF CELLS. THE			
Note: STAINED WITH P.T.A.H. THEREFORE, THIS NEOPLASM IS			
Note: CELLS INDICATES A RHABDOMYOSARCOMA. CROSS-STRIA-			
Note: PRESENCE OF RACKET CELLS AND MULTINUCLEATE GIANT			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 3-4			
Thymus		Atrophy	Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 46

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 600

**DOSE:** CONTROL

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 46	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
<b>OBSERVATIONS</b>			
Preputial Gland		Mineralization Necrosis	Minimal Mild
Note: NECROSIS      TGLs = 1-1			
Stomach	Forestomach Glandular	Hyperkeratosis Inflammation	Minimal Chronic Active, Mild
<hr/>			
<b>PRIMARY CAUSE OF DEATH</b>	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 46

TRT#: 3

SEX: Male

DAY ON TEST: 682

DOSE: 5.0%

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Nose  
Prostate  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Pancreas  
Salivary Glands  
Testes  
Urinary Bladder

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Parathyroid Gland  
Seminal Vesicle  
Thymus

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Lymph Node - Mesenteric  
Pituitary Gland  
Skin  
Thyroid Gland

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland  
Bone  
    Note: HYPEROSTOSIS   TGLs = 2-10  
Harderian Gland  
    Note: ADENOMA        TGLs = 1-9  
Spleen  
Stomach

Capsule  
Tarsal  
  
  
  
  
  
Glandular

Hyperplasia  
Hyperostosis  
  
Adenoma  
  
Hematopoietic Cell Proliferation  
Inflammation

Minimal  
Minimal  
  
  
  
Mild  
Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Gallbladder
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	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Liver		Fatty Change	Diffuse, Mild
		Hepatocellular Adenoma	
		Necrosis	Mild
Note: HEPATOCLR ADEN TGLs = 2-2.1			
Lymph Node	Mesenteric	Angiectasis	Mild
Skin		Acanthosis	Mild
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild

Note: ACANTHOSIS TGLs = 3-3

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 47	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Bone Note: HYPEROSTOSIS TGLs = 2-3	Tarsal	Hyperostosis	Moderate
Skin Note: NECROSIS TGLs = 3-2	Prepuce Prepuce	Inflammation Necrosis	Acute, Mild Mild
Spleen		Hematopoietic Cell Proliferation	Mild

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 47

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 730

**DOSE:** 5.0%

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Pituitary Gland  
Skin  
Thyroid Gland

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Prostate  
Stomach - Forestomach  
Trachea

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Pancreas  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Parathyroid Gland  
Seminal Vesicle  
Testes

**MISSING**

Lymph Node - Mandibular

Mammary Gland

Thymus

**OBSERVATIONS**

Adrenal Gland  
Brain  
Liver

Capsule

Hyperplasia  
Mineralization  
Hepatocellular Adenoma  
Mixed Cell Focus

Minimal  
Mild

Lymph Node

Mesenteric  
Mesenteric

Angiectasis  
Hematopoietic Cell Proliferation  
Hematopoietic Cell Proliferation

Minimal  
Minimal  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 48

TRT#: 1

SEX: Male

DAY ON TEST: 543

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	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	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Adrenal Gland - Medulla	Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Lymph Node	Mesenteric	Angiectasis	Minimal
Preputial Gland		Inflammation	Chronic Active, Minimal
Note: INFLAMMATION TGLs = 2-12			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-11			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 48	<b>TRT#:</b> 2 <b>DOSE:</b> 2.5%	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b> Spleen	Stomach - Forestomach	Stomach - Glandular
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<b>PRIMARY CAUSE OF DEATH</b>	-
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 48

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Prostate  
Stomach - Forestomach  
Trachea

Bone Marrow  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Testes  
Urinary Bladder

Brain  
Heart  
Intestine Small - Duodenum  
Kidney  
Pancreas  
Seminal Vesicle  
Thymus

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pituitary Gland  
Skin  
Thyroid Gland

**MISSING**

Lymph Node - Mandibular

Mammary Gland

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland

Capsule  
Medulla

Hyperplasia  
Hyperplasia  
Hyperostosis

Mild  
Minimal  
Mild

Bone

Tarsal

Angiectasis  
Dilatation

Minimal  
Moderate

Note: HYPEROSTOSIS TGLs = 4-10

Lymph Node

Mesenteric

Preputial Gland

[ Dilatation TGLS = 2-9 ]

Spleen

Hematopoietic Cell Proliferation  
Hyperplasia

Minimal  
Minimal

Stomach

Glandular

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 49

TRT#: 1

SEX: Male

DAY ON TEST: 414

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Thyroid Gland

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Pituitary Gland  
Stomach - Forestomach  
Trachea

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Preputial Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Salivary Glands  
Thymus

MISSING

Gallbladder

Mammary Gland

Prostate

OBSERVATIONS

Liver Hepatocellular Adenoma

[ Hepatocellular Adenoma TGLS = 6-3 ]

Pancreas Artery Necrosis Fibrinoid, Moderate

Skin Prepuce Acanthosis Minimal

Note: INFLAMMATION TGLs = 2-11 Inflammation Acute, Moderate

Spleen Hematopoietic Cell Proliferation Moderate

Note: MEGAKARYOCYTES INCREASED

Testes Artery Necrosis Fibrinoid, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

ANIMAL ID: 49

TRT#: 2  
DOSE: 2.5%

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney	Salivary Glands	Stomach - Forestomach	Stomach - Glandular
Trachea			

OBSERVATIONS

Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 6-4		
Preputial Gland		Necrosis	Moderate
Note: NECROSIS	TGLs = 4-2		
Skin	Prepuce	Inflammation	Chronic Active, Moderate
	Prepuce	Necrosis	Mild
Note: NECROSIS	TGLs = 2-1		
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 49

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Liver	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Moderate
	Mandible	Osteosarcoma	
Note: OSTEOSARC TGLs = 4-9+10			
Note: A TOOTH IN THE SECTION CIRCLED			
Note: HYPEROSTOSIS TGLs = 3-11			
Lung	Alveolar Epith	Hyperplasia	Minimal
Skin		Inflammation	Acute, Mild
		Squamous Cell Papilloma	
Note: PAPILLOMA SQUA TGLs = 2-10			
Spleen		Hematopoietic Cell Proliferation	Mild
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 50

TRT#: 1

SEX: Male

DAY ON TEST: 717

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone Marrow	Brain	Epididymis
Esophagus	Gallbladder	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
Nose	Pancreas	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hypertrophy	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 1-11			
Liver		Hepatocellular Adenoma	
Note: HEPATOCLR ADEN TGLs = 6-2			
Lung		Hemorrhage	Mild
Lymph Node	Mesenteric	Angiectasis	Mild
Preputial Gland		Dilatation	Moderate
		Inflammation	Chronic Active, Minimal
Note: DESQUAMATED MATERIAL IN LUMINA OF DUCTS [ Inflammation TGLS = 2-9 ]			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 5-10			
Note: PREPUCE ON SLIDE #9 APPEARS NORMAL			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 50

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Bone

Stomach - Forestomach

Stomach - Glandular

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 50

TRT#: 3

SEX: Male

DAY ON TEST: 717

DOSE: 5.0%

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone Marrow	Brain	Epididymis	Esophagus
Gallbladder	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	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Lymph Node - Mesenteric	Mammary Gland	Nose
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
	Medulla	Hyperplasia	Minimal
Bone	Tarsal	Hyperostosis	Mild
Note: HYPEROSTOSIS TGLs = 4-11			
Epididymis			
Note: IN SECTION #10 NUCLEI LINING EPIDIDYMAL DUCTS			
Note: BIZARRE. CLUSTERS OF SPERMATOOZOA BOTH IN AND			
Note: AND OUTSIDE THE DUCTS			
Note: ARE MARKEDLY HYPERCHROMATIC AND A FEW ARE			
Kidney	Cortex	Mineralization	Minimal
Lung		Congestion	Mild
		Inflammation	Chronic Active, Mild
Skin	Subcut Tiss	Fibrosarcoma	Multiple
		Hyperkeratosis	Mild
		Mineralization	Moderate
Note: FIBROSARC TGLs = 1-9,2-9			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 6-3			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 50

**TRT#:** 3  
**DOSE:** 5.0%

**SEX:** Male  
**DISP:** Moribund

**DAY ON TEST:** 717  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Spleen	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Liver		Clear Cell Focus	
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Note: CLEAR CL FOCUS TGLs = 3.1

Uterus	Endometrium	Hyperplasia	Moderate
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[ Hyperplasia TGLS = 2-2 ]

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

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**MISSING**

Adrenal Gland - Medulla	Thymus
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 1

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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 - Mesenteric	Mammary Gland	Nose	Ovary
Pancreas	Parathyroid Gland	Pituitary Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mandibular

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4,3-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Liver	Stomach - Glandular
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**OBSERVATIONS**

Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild

[ Acanthosis TGLS = 2-2 ]

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 711 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

Bone	Esophagus	Heart	Intestine Large - Colon
Kidney	Nose	Pancreas	Salivary Glands
Skin	Stomach - Glandular	Trachea	Urinary Bladder
Uterus			

**MISSING**

Islets, Pancreatic Thyroid Gland	Mammary Gland	Parathyroid Gland	Pituitary Gland
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**AUTO PRECLUDES DIAG.**

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

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Medulla	Hyperplasia	Mild
	Cortex	Lymphoma Malignant Undifferentiated Cell Type	

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

Bone Marrow		Myelofibrosis	Minimal
Brain		Mineralization	Mild
Liver		Lymphoma Malignant Undifferentiated Cell Type	
Lung		Lymphoma Malignant Undifferentiated Cell Type	
Lymph Node	Mandibular	Lymphoma Malignant Undifferentiated Cell Type	
	Mediastinal	Lymphoma Malignant Undifferentiated Cell Type	
	Mesenteric	Lymphoma Malignant Undifferentiated Cell Type	

Note: LYMPH MAL UNDF TGLs = 5-9

Note: LYMPH MAL UNDF TGLs = 4-5

Note: LYMPH MAL UNDF TGLs = 8-4+10

Note: STARRY-SKIED PATTERN

Ovary		Lymphoma Malignant Undifferentiated Cell Type	
Spleen		Lymphoma Malignant Undifferentiated Cell Type	
Stomach	Forestomach	Hyperkeratosis	Mild
Thymus		Lymphoma Malignant Undifferentiated Cell Type	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 2

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 711

**DOSE:** 5.0%

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Mammary Gland	Nose
Oviduct	Pancreas	Pituitary Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Trachea

MISSING

Lymph Node - Mesenteric	Parathyroid Gland		
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Kidney		Lymphoma Malignant Undifferentiated Cell Type	
Liver		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 4-2		
Lung		Alveolar/Bronchiolar Adenoma	
		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 3-1		
Lymph Node	Axillary	Lymphoma Malignant Undifferentiated Cell Type	
	Mandibular	Lymphoma Malignant Undifferentiated Cell Type	
	Mediastinal	Lymphoma Malignant Undifferentiated Cell Type	
Ovary		Lymphoma Malignant Undifferentiated Cell Type	
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 1-3		
Thymus		Lymphoma Malignant Undifferentiated Cell Type	
Thyroid Gland	Follicular Cel	Adenoma	
Urinary Bladder		Lymphoma Malignant Undifferentiated Cell Type	
Uterus	Endometrium	Hyperplasia	Minimal
		Inflammation	Chronic Active, Mild

PRIMARY CAUSE OF DEATH	-
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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 2

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 732

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 630 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lung
Mammary Gland	Ovary	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Fatty Change	Focal, Minimal
Lymph Node	Mesenteric	Angiectasis	Mild
	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 5-11			
Note: LYMPH MAL MIXD TGLs = 3-5			
Nose	Nasolacrim Dct	Inflammation	Acute, Moderate
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 2-12			
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
 Test Type: CHRONIC  
 Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
 Test Compound: Pentaerythritol tetranitrate  
 CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
 Time Report Requested: 19:23:13  
 First Dose M/F: NA / NA  
 Lab: TSI MASON

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Kidney		Lymphoma Malignant Mixed	
Liver		Hepatocellular Adenoma	
		Lymphoma Malignant Mixed	
Note: HEPATOCLR ADEN TGLs = 4-2			
Lymph Node	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 3-3			
Spleen		Hematopoietic Cell Proliferation	Minimal
Thymus		Lymphoma Malignant Mixed	
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Mammary Gland
Nose	Ovary	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Fibrosis	Mild
		Necrosis	Minimal
Note: FIBROSIS TGLs = 11-2			
Note: FIBROSIS AND NECROSIS IN THE SECTION CIRCLED			
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Deep Cervical	Lymphoma Malignant Mixed	
	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 3-5,4-3,6-5,7-5			
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 8-3			
Uterus	Endometrium	Hyperplasia	Minimal
		Inflammation	Chronic Active, Moderate
Note: INFLAMMATION TGLs = 5-4			

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b>			
Gallbladder	Liver	Stomach - Forestomach	Stomach - Glandular
<b>OBSERVATIONS</b>			
Spleen	Lymph Follic	Hyperplasia	Mild
Uterus	Endometrium	Hyperplasia	Mild
[ Hyperplasia TGLS = 1-2 ]			
<b>PRIMARY CAUSE OF DEATH</b>	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Gallbladder	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	Oviduct
Pancreas	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**OBSERVATIONS**

Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4+4.1

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Ovary		Cyst	
Note: CYST	TGLs = 2-4.		
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Minimal
Thyroid Gland	Follicular Cel	Hyperplasia	Minimal
Uterus	Endometrium	Hyperplasia	Minimal
		Polyp Stromal	
Note: HYPERPLASIA	TGLs = 4-4		
Note: POLYP STROMAL	TGLs = 3-4		

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Eye	Gallbladder	Intestine Small - Duodenum	Intestine Small - Ileum
Spleen	Stomach - Forestomach	Stomach - Glandular	Uterus

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**OBSERVATIONS**

Intestine Small Note: HYPERPLASIA TGLs = 6-2	Jejunum	Hyperplasia	Mild
Liver		Necrosis	Minimal
Ovary		Degeneration	Cystic, Mild
Note: DEGEN TGLs = 2-3,3-3		Granulosa Cell Tumor Benign	

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PRIMARY CAUSE OF DEATH

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Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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
Oviduct	Pancreas	Pituitary Gland	Salivary Glands
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

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**MISSING**

Parathyroid Gland

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Liver		Eosinophilic Focus	
Ovary		Cyst	
Note: CYST TGLs = 2-4			
Note: CYST WALL LINED BY TALL EPITHELIUM			
Spleen			
Note: INCREASED CELLULARITY			
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 3-4,4-4			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Stomach - Forestomach
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mandibular

**OBSERVATIONS**

Ovary		Cyst	
Note: CYST	TGLs = 2-4		
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Glandular	Inflammation	Chronic Active, Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b> Gallbladder Uterus	Liver	Spleen	Stomach - Glandular
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<b>OBSERVATIONS</b> Stomach [ Hyperkeratosis TGLS = 3-2 ]	Forestomach	Hyperkeratosis	Mild
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<b>PRIMARY CAUSE OF DEATH</b>	-		
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Pituitary Gland
Salivary Glands	Skin	Spleen	Stomach - Forestomach
Thymus	Thyroid Gland	Trachea	Urinary Bladder

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**MISSING**

Lymph Node - Mandibular	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Stomach	Glandular	Inflammation	Chronic Active, Mild
Uterus	Endometrium	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Ovary		Granulosa Cell Tumor Benign	
Note: GRANLSA TM BGN TGLs = 1-4			
Note: SUGGESTION OF AN ABSCESS IN LEFT OVARY			
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 7	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 5 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Heart	Intestine Large - Colon	Intestine Small - Duodenum
Islets, Pancreatic	Kidney	Liver	Lung
Lymph Node - Mandibular	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

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**MISSING**

Esophagus	Lymph Node - Mesenteric	Mammary Gland	
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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Ileum
Intestine Small - Jejunum			

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**OBSERVATIONS**

Ovary		Choriocarcinoma Hemorrhage	Moderate
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Note: HEMORRHAGE TGLs = 1-5

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 7

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Oviduct  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Thymus

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Parathyroid Gland  
Spleen  
Thyroid Gland

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Pituitary Gland  
Stomach - Forestomach  
Trachea

**MISSING**

Mammary Gland

**OBSERVATIONS**

Lung Alveolar/Bronchiolar Adenoma

[ Alveolar/Bronchiolar Adenoma TGLS = 6-1 ]

Ovary Angiectasis Mild  
Cyst  
Cystadenoma

Note: CYSTADENOMA TGLs = 3-4

Note: CYST TGLs = 2-4,3-4

Uterus Endometrium Hyperplasia Moderate

Note: HYPERPLASIA TGLs = 4-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 7

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Esophagus
Gallbladder	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 - Mesenteric
Mammary Gland	Nose	Ovary	Oviduct
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

**MISSING**

Lymph Node - Mandibular

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Bone Marrow		Myelofibrosis	Mild
Brain		Mineralization	Minimal
Liver		Hepatocellular Adenoma	
Pancreas	Acinus	Atrophy	Mild
Note: ATROPHY TGLs = 2-5			
Spleen	Lymph Follic	Hyperplasia	Moderate
Note: SUGGESTION OF A LYMPHOMA			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Liver	Spleen	Stomach - Forestomach
Stomach - Glandular			

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**OBSERVATIONS**

Ovary Note: DEGEN      TGLs = 2-2		Degeneration	Cystic, Marked
Uterus Note: HYPERPLASIA      TGLs = 3-2	Endometrium	Hyperplasia	Moderate

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Ovary		Degeneration	Cystic, Mild
		Mineralization	Mild
		Pigmentation	Mild
		Thrombosis	
Note: THROMBUS	TGLs = 2-4		
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Kidney			
Note: A FEW CLUSTERS OF LYMPHOCYTES			
Ovary			
Note: CYSTIC DEGENERATION; LINED BY CUBOIDAL EPITHELIUM			
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 1-4			

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 421 <b>HISTO:</b>
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**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 - Ileum	Islets, Pancreatic	Lung
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	Uterus

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**MISSING**

Intestine Small - Duodenum	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Thymus			

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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Small - Jejunum
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Kidney	Papilla	Mineralization	Minimal
Liver		Hematopoietic Cell Proliferation	Mild
Lymph Node	Mediastinal	Infiltration Cellular	Plasma Cell, Mild
Mesentery		Inflammation	Acute, Mild
Ovary	Bilateral	Abscess	Marked
[ Abscess TGLS = 2-5,3-5 ]			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 1-4			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 675 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Parathyroid Gland	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Lymph Node	Lumbar	Infiltration Cellular	Plasma Cell, Mild
	Renal	Infiltration Cellular	Plasma Cell, Mild
Note: INFILTRAT CELL TGLs = 3-9,4-9			
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Mild
		Inflammation	Chronic Active, Mild
Note: HYPERPLASIA TGLs = 2-4			

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 9

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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
Oviduct	Pancreas	Pituitary Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Kidney		Lymphoma Malignant Histiocytic	
Liver		Lymphoma Malignant Histiocytic	
	[ Lymphoma Malignant Histiocytic TGLS = 3-2 ]		
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 10	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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<b>NORMAL</b>			
Gallbladder	Liver	Stomach - Forestomach	Stomach - Glandular

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<b>OBSERVATIONS</b>			
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus		Angiectasis	Mild
	Endometrium	Hyperplasia	Mild

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Note: HYPERPLASIA    TGLs = 2-3,3-3

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<b>PRIMARY CAUSE OF DEATH</b>	-
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 10

TRT#: 5

SEX: Female

DAY ON TEST: 605

DOSE: 5.0%

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Liver	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Ovary
Oviduct	Pituitary Gland	Salivary Glands	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Intestine Small	Duodenum, Epithelium	Hyperplasia	Mild
Lung		Hemorrhage	Minimal
Pancreas	Acinus	Atrophy	Minimal
		Inflammation	Chronic Active, Mild
Uterus	Endometrium	Hyperplasia	Moderate

Note: HYPERPLASIA TGLs = 1-5,2-5

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 10

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
	Cortex	Hypertrophy	Minimal
Liver		Necrosis	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
	Lymph Follic	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 2-3		
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 3-4		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 11	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Eye	Gallbladder	Spleen	Stomach - Forestomach
Stomach - Glandular			

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**OBSERVATIONS**

Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 2,3-3		
Liver		Basophilic Focus	
Uterus	Endometrium	Hyperplasia	Moderate
Note: HYPERPLASIA	TGLs = 4-2		

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 11

TRT#: 5

DOSE: 5.0%

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Nose	Pancreas	Pituitary Gland	Salivary Glands
Skin	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Ovary		Cyst	
		Luteoma	
Note: LUTEOMA	TGLs = 2-4		
Spleen		Hematopoietic Cell Proliferation	Mild
Note: LARGE CELLULAR LYMPH FOLLICLES			
Stomach	Forestomach	Acanthosis	Minimal
	Forestomach	Hyperkeratosis	Mild
	Glandular	Inflammation	Chronic Active, Mild
Uterus	Endometrium	Hyperplasia	Moderate
Note: HYPERPLASIA	TGLs = 4-4.1		

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 11

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lung
Mammary Gland	Nose	Ovary	Oviduct
Pancreas	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 6-2		
Lymph Node	Mandibular	Lymphoma Malignant Undifferentiated Cell Type	
	Mesenteric	Lymphoma Malignant Undifferentiated Cell Type	
	Pancreatic	Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 7-5		
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 4-3		
Thymus		Lymphoma Malignant Undifferentiated Cell Type	
Note: ? LYMPHOCYTIC LYMPHOMA			
Note: MASS ON SLIDE #9 IS PROBABLY THYMUS			
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 2-4		

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 12	TRT#: 4 DOSE: 2.5%	SEX: Female DISP: Moribund	DAY ON TEST: 688 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Gallbladder	Stomach - Glandular
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OBSERVATIONS

Liver		Hematopoietic Cell Proliferation	Moderate
Lymph Node	Mesenteric	Hematopoietic Cell Proliferation	Mild
Ovary		Abscess	Marked
[ Abscess TGLs = 4-3 ]			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 2-2			
Note: MEGAKARYOCYTES INCREASED			
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild
	Forestomach	Necrosis	Mild
Note: NECROSIS TGLs = 5-2			
Uterus	Endometrium	Hyperplasia	Mild
		Inflammation	Chronic Active, Mild
Note: HYPERPLASIA TGLs = 6-4			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 12

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Brain	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Kidney	Liver	Lung	Mammary Gland
Nose	Ovary	Oviduct	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Bone Marrow		Lymphoma Malignant Mixed	
Intestine Large	Colon, Lymphoid Nodul	Lymphoma Malignant Mixed	
Lymph Node	Axillary	Lymphoma Malignant Mixed	
	Lumbar	Lymphoma Malignant Mixed	
	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-5		
Note: LYMPH MAL MIXD	TGLs = 5-5		
Note: LYMPH MAL MIXD	TGLs = 6-7		
Note: LYMPH MAL MIXD	TGLs = 7-5		
Pancreas		Lymphoma Malignant Mixed	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 4-3		
Thymus		Lymphoma Malignant Mixed	
Uterus	Endometrium	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 12

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 5.0%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: HYPERPLASIA TGLs = 3-4.1

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 12

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 732

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

**MISSING**

Parathyroid Gland	Thyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Ovary		Cyst	
Note: CYST	TGLs = 1-4		
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 13	TRT#: 4 DOSE: 2.5%	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 731 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Gallbladder	Stomach - Glandular
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OBSERVATIONS

Liver		Fatty Change	Diffuse, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 3-3		
Spleen		Hematopoietic Cell Proliferation	Minimal
	Lymph Follic	Hyperplasia	Moderate
Note: HYPERPLASIA	TGLs = 2-2		
Note: MORE LIKE A LYMPHOMA			
Stomach	Forestomach	Hyperkeratosis	Minimal
Uterus	Endometrium	Hyperplasia	Moderate
Note: HYPERPLASIA	TGLs = 1-2		

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 13	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 463 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Bone	Nose
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**MISSING**

Adrenal Gland - Cortex Islets, Pancreatic Ovary Skin Uterus	Adrenal Gland - Medulla Lymph Node - Mandibular Pancreas Thymus	Esophagus Lymph Node - Mesenteric Parathyroid Gland Thyroid Gland	Gallbladder Mammary Gland Pituitary Gland Urinary Bladder
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**AUTO PRECLUDES DIAG.**

Bone Marrow Intestine Large - Colon Intestine Small - Jejunum Salivary Glands	Brain Intestine Large - Rectum Kidney Stomach - Forestomach	Heart Intestine Small - Duodenum Liver Stomach - Glandular	Intestine Large - Cecum Intestine Small - Ileum Lung Trachea
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**OBSERVATIONS**

Lymph Node Spleen Note: LYMPH MAL      TGLs = 3-3	Lymphoma Malignant Lymphoma Malignant
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**PRIMARY CAUSE OF DEATH**      -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 13

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Heart	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Ovary	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	

MISSING

Nose

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Gallbladder		Lymphoma Malignant Mixed	
Intestine Large	Colon, Lymphoid Nodul	Lymphoma Malignant Mixed	
Kidney		Lymphoma Malignant Mixed	
Liver		Lymphoma Malignant Mixed	
Lymph Node	Axillary	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Lymphoma Malignant Mixed	
Urinary Bladder		Lymphoma Malignant Mixed	
Uterus	Endometrium	Hyperplasia	Mild
		Polyp Stromal	

Note: POLYP STROMAL TGLs = 1-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 14

TRT#: 4

DOSE: 2.5%

SEX: Female

DISP: Moribund

DAY ON TEST: 579

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	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
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder
Uterus			

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Kidney			
Note: INCREASED CELLULARITY IN SOME GLOMERULI			
Liver		Hematopoietic Cell Proliferation	Mild
Lung		Hemorrhage	Minimal
Lymph Node	Axillary	Hematopoietic Cell Proliferation	Minimal
	Lumbar	Hematopoietic Cell Proliferation	Mild
	Mandibular	Hematopoietic Cell Proliferation	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
	Renal	Hematopoietic Cell Proliferation	Mild
	Axillary	Infiltration Cellular	Plasma Cell, Mild
	Lumbar	Infiltration Cellular	Plasma Cell, Mild
	Mediastinal	Infiltration Cellular	Plasma Cell, Moderate
	Renal	Infiltration Cellular	Plasma Cell, Mild
Note: INFILTRAT CELL TGLs = 10-11,11-2			
Note: HEMA CELL PROL TGLs = 9-11			
Note: HEMA CELL PROL TGLs = 8-11			
Mesentery		Inflammation	Acute, Moderate
Ovary		Abscess	Marked
		Degeneration	Cystic, Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 14

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 579

**DOSE:** 2.5%

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

[ Abscess TGLS = 1-5.1 ]

[ Degeneration TGLS = 2-5.1 ]

Spleen

Hematopoietic Cell Proliferation

Moderate

Note: HEMA CELL PROL TGLs = 5-4

Note: MEGAKARYOCYTES INCREASED

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 14

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Ovary  
Skin  
Urinary Bladder

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Oviduct  
Stomach - Forestomach

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Mammary Gland  
Pancreas  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Nose  
Salivary Glands  
Trachea

**MISSING**

Lymph Node - Mandibular

Parathyroid Gland

Thymus

**OBSERVATIONS**

Adrenal Gland  
  
Pituitary Gland  
Spleen  
Stomach  
Uterus

Capsule  
Cortex  
Pars Distalis  
  
Glandular  
Endometrium

Hyperplasia  
Hyperplasia  
Adenoma  
Hematopoietic Cell Proliferation  
Inflammation  
Hyperplasia

Mild  
Mild  
  
Minimal  
Chronic Active, Minimal  
Mild

Note: HYPERPLASIA TGLs = 2-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 14

TRT#: 7

SEX: Female

DAY ON TEST: 396

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Kidney  
Nose  
Parathyroid Gland  
Spleen  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Liver  
Ovary  
Pituitary Gland  
Stomach - Forestomach  
Urinary Bladder

Bone  
Heart  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Oviduct  
Salivary Glands  
Stomach - Glandular  
Uterus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Skin  
Thyroid Gland

**MISSING**

Mammary Gland

Thymus

**AUTO PRECLUDES DIAG.**

Gallbladder

Intestine Small - Duodenum

**OBSERVATIONS**

Islets, Pancreatic  
Lung

Hyperplasia  
Edema

Mild  
Minimal

Note: MANY BLOOD VESSEL WALLS SCLEROSED.

PRIMARY CAUSE OF DEATH

-

Animal Note: BLOOD PRESENT IN NASAL CAVITY.

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 15	TRT#: 4 DOSE: 2.5%	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 731 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Gallbladder	Stomach - Forestomach	Trachea
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OBSERVATIONS

Liver		Hemangiosarcoma	
		Hematopoietic Cell Proliferation	Mild
		Necrosis	Mild
	[ Hematopoietic Cell Proliferation TGLs = 6-1 ]		
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 4-3		
Skin	Subcut Tiss	Fibrosarcoma	
		Necrosis	Moderate
Note: FIBROSARC	TGLs = 2-4		
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL	TGLs = 5		
Stomach	Glandular	Inflammation	Chronic Active, Minimal
Uterus		Abscess	Moderate
Note: ABSCESS	TGLs = 3-2		

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 15

TRT#: 5

SEX: Female

DAY ON TEST: 689

DOSE: 5.0%

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Pituitary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Ovary			
Note: HEMORRHAGIC FOLLICLES			
Spleen		Hematopoietic Cell Proliferation	Mild
Note: PROBABLE LYMPHOMA IN THYMUS AND SPLEEN			
Note: PROBABLE LYMPHOMA			
Note: HEMA CELL PROL TGLs = 2-3			
Stomach	Forestomach	Hyperkeratosis	Mild
	Glandular	Inflammation	Chronic Active, Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 15	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4,3-4

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 16	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 674 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Esophagus	Gallbladder	Stomach - Forestomach	Stomach - Glandular
Trachea			

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**OBSERVATIONS**

Liver		Hematopoietic Cell Proliferation Lymphoma Malignant Histiocytic	Mild
Note: LYMPH MAL HIST TGLs = 5-1			
Lung		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 3-3			
Lymph Node	Mediastinal	Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 7-3			
Spleen		Lymphoma Malignant Histiocytic	
Uterus	Endometrium	Hyperplasia	Mild
[ Hyperplasia TGLS = 4-2 ]			

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**PRIMARY CAUSE OF DEATH** -

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Animal Note: THYMUS CANNOT BE IDENTIFIED.

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 16

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Gallbladder	Harderian Gland
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	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Spleen	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mesenteric

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Fatty Change	Focal, Minimal
Ovary		Cyst	
Note: CYST	TGLs = 2-4		
Stomach	Forestomach	Hyperkeratosis	Minimal
Uterus	Endometrium	Hyperplasia	Moderate
Note: HYPERPLASIA	TGLs = 3-4.1		

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 16

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Islets, Pancreatic	Kidney	Liver	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Ovary	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Intestine Small - Jejunum

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Moderate

Note: HYPERPLASIA TGLs = 1-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 17

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Gallbladder

Spleen

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Liver

Lymphoma Malignant Histiocytic

Ovary

Cyst

Degeneration

Cystic, Moderate

[ Degeneration TGLS = 1-2 ]

Uterus

Endometrium

Hyperplasia

Moderate

---

[ Hyperplasia TGLS = 2-3 ]

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 17	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Moderate

Note: HYPERPLASIA TGLs = 2-4.1

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 17

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Mammary Gland	Nose	Oviduct
Pituitary Gland	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Parathyroid Gland
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OBSERVATIONS

Kidney		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 8-3.1,9-3.1		
Liver		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 10-2,11-2		
Note: MORE LIKE A LYMPHOBLASTIC TYPE			
Lung		Lymphoma Malignant Undifferentiated Cell Type	
Lymph Node	Lumbar	Lymphoma Malignant Undifferentiated Cell Type	
	Mandibular	Lymphoma Malignant Undifferentiated Cell Type	
	Mediastinal	Lymphoma Malignant Undifferentiated Cell Type	
	Mesenteric	Lymphoma Malignant Undifferentiated Cell Type	
	Renal	Lymphoma Malignant Undifferentiated Cell Type	
	Thoracic	Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 2-5		
Note: LYMPH MAL UNDF	TGLs = 6-4		
Note: LYMPH MAL UNDF	TGLs = 7-5		
Note: LYMPH MAL UNDF	TGLs = 5-3		
Ovary		Lymphoma Malignant Undifferentiated Cell Type	
Pancreas		Lymphoma Malignant Undifferentiated Cell Type	
Salivary Glands		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 1-5		
Spleen		Angiectasis	Minimal

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 17

**TRT#:** 7  
**DOSE:** CONTROL

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 732  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: LYMPH MAL UNDF TGLs = 3-3  
Thymus  
Uterus  
Note: HYPERPLASIA TGLs = 4-4

Endometrium

Lymphoma Malignant Undifferentiated Cell Type

Lymphoma Malignant Undifferentiated Cell Type

Hyperplasia

Moderate

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 18	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Liver	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Pituitary Gland Note: ADENOMA	TGLs = 2-3	Pars Distalis	Adenoma	
Spleen			Hematopoietic Cell Proliferation	Mild

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 18

TRT#: 5

DOSE: 5.0%

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO:

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	Mammary Gland
Nose	Oviduct	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Gallbladder	Thymus
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
	Cortex	Sarcoma	Metastatic (Uncertain Primary Site)
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
Liver		Necrosis	Mild
		Sarcoma	Metastatic (Uncertain Primary Site)
Note: SARCOMA	TGLs = 9-9		
Note: SARCOMA	TGLs = 9-2		
Lung	Pleura	Sarcoma	Metastatic (Uncertain Primary Site)
Lymph Node	Mesenteric	Sarcoma	Metastatic (Uncertain Primary Site)
Note: SARCOMA	TGLs = 6-5		
Mesentery		Sarcoma	Metastatic (Uncertain Primary Site)
Note: SARCOMA	TGLs = 8-6+5		
Ovary		Cyst	
		Sarcoma	Metastatic (Uncertain Primary Site)
Note: SARCOMA	TGLs = 5-4		
Pancreas	Acinus	Atrophy	Marked
		Sarcoma	Metastatic (Uncertain Primary Site)
Note: SARCOMA	TGLs = 7-5.1		
Note: ATROPHY	TGLs = 7-5		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 18

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 5.0%

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Skeletal Muscle Note: SARCOMA TGLs = 10-9	Diaphragm	Sarcoma	Metastatic (Uncertain Primary Site)
Spleen		Hematopoietic Cell Proliferation Sarcoma	Mild Metastatic (Uncertain Primary Site)
Uterus Note: THE POSSIBILITY OF A MESOTHELIOMA-FIBROUS Note: THE PRIMARY SITE COULD NOT BE IDENTIFIED. Note: DIFFERENTIATED SARCOMA OR A LEIOMYOSARCOMA. Note: THE NEOPLASM IN THIS MOUSE IS A POORLY Note: METASTASES. Note: NECROSIS. FINE LINE BETWEEN INVASION AND Note: TYPE HAS TO BE CONSIDERED. MULTIPLE AREAS OF	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 18

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct
Pancreas	Parathyroid Gland	Pituitary Gland	Salivary Glands
Skin	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Lymph Node - Mandibular

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Hepatocellular Adenoma	
Lung		Hemorrhage	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Hyperkeratosis	Mild
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4,3-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 19

**TRT#:** 4  
**DOSE:** 2.5%

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 731  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder  
Stomach - Glandular

Liver

Spleen

Stomach - Forestomach

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**OBSERVATIONS**

Uterus  
Note: HYPERPLASIA    TGLs = 1-2

Endometrium

Hyperplasia

Moderate

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PRIMARY CAUSE OF DEATH

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-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 19

TRT#: 5

SEX: Female

DAY ON TEST: 258

DOSE: 5.0%

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Liver  
Oviduct  
Salivary Glands  
Thyroid Gland

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Trachea

Bone  
Heart  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Spleen  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Islets, Pancreatic  
Nose  
Pituitary Gland  
Stomach - Forestomach  
Uterus

MISSING

Mammary Gland

Thymus

AUTO PRECLUDES DIAG.

Gallbladder

Intestine Small - Duodenum

Intestine Small - Jejunum

Stomach - Glandular

OBSERVATIONS

Kidney  
Lung  
Ovary

Renal Tubule

Pigmentation  
Edema  
Teratoma

Mild  
Minimal

Note: TERATOMA AS THERE IS A HAPHAZARD DISTRIBUTION OF  
Note: THE NEOPLASM IN ONE OVARY (5A) IS CALLED AS A  
Note: TERATOMA TGLs = 2-5.1  
Note: ARE A FEW NESTS OF TROPHOBLAST-LIKE CELLS.  
Note: LINED BY CUBOIDAL OR COLUMNAR EPITHELIA, AREAS OF  
Note: MELANIN, CARTILAGE, FAT, GLANDULAR STRUCTURES  
Note: MINERALIZATION, AND NEURAL TISSUE. ALSO, THERE

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

<b>ANIMAL ID:</b> 19	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Brain	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Islets, Pancreatic	Kidney	Liver	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Ovary
Oviduct	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Bone	Bone Marrow	Esophagus	Nose
Parathyroid Gland			

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Intestine Small	Ileum, Lymphoid Nodul	Lymphoma Malignant Undifferentiated Cell Type	
	Jejunum	Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF TGLs = 4-6			
Pancreas	Acinus	Atrophy	Minimal
Spleen		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF TGLs = 3-3			
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 2-4			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 20

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Gallbladder	Liver	Spleen	Stomach - Forestomach
Stomach - Glandular			

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**OBSERVATIONS**

Liver			
Note: M			
Note: CLUSTERS OF POLYMORPHS AND MONONUCLEAR CELLS			
Uterus	Endometrium	Hyperplasia	Moderate
[ Hyperplasia TGLS = 2-3,3-3 ]			

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 20

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Esophagus	Gallbladder
Heart	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Islets, Pancreatic	Kidney	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Oviduct	Pancreas	Salivary Glands	Thymus
Trachea	Urinary Bladder		

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hypertrophy	Mild
Bone Marrow		Myelofibrosis	Minimal
Brain		Mineralization	Minimal
Intestine Small	Ileum	Lymphoma Malignant Mixed	
	Jejunum	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 5-6		
Liver		Necrosis	Mild
		Pigmentation	Mild
		Thrombosis	
Note: PIGMENT	TGLs = 6-2		
Ovary		Cyst	
Note: CYST	TGLs = 3-4		
Pituitary Gland	Pars Distalis	Adenoma	
Skin		Inflammation	Chronic Active, Mild
Note: INFLAMMATION	TGLs = 2-4		
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Hyperkeratosis	Minimal
	Glandular	Inflammation	Chronic Active, Mild
	Glandular	Mineralization	Minimal
Note: AN EARLY ADENOMATOUS CHANGE PERHAPS			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 20

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 730

**DOSE:** 5.0%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: INFLAMMATION TGLs = 7-3

Thyroid Gland

Follicular Cel

Hyperplasia

Mild

Uterus

Endometrium

Hyperplasia

Mild

Note: HYPERPLASIA TGLs = 4-4

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 20

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Liver	Lymph Node - Mesenteric
Mammary Gland	Nose	Ovary	Oviduct
Pancreas	Parathyroid Gland	Pituitary Gland	Salivary Glands
Skin	Thyroid Gland	Trachea	Urinary Bladder

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Intestine Small	Ileum, Lymphoid Nodul	Mineralization	Minimal
Kidney			
Note: CLUSTERS OF LYMPHOCYTES. ?LYMPHOMA?			
Lung		Hemorrhage	Minimal
Lymph Node	Mandibular	Lymphoma Malignant Lymphocytic	
	Mediastinal	Lymphoma Malignant Lymphocytic	
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Hyperkeratosis	Minimal
	Glandular	Inflammation	Chronic Active, Minimal
Thymus		Lymphoma Malignant Lymphocytic	
Uterus		Angiectasis	Minimal
	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 2-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 21	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
<b>NORMAL</b>			
Gallbladder	Spleen	Stomach - Forestomach	Stomach - Glandular
<b>OBSERVATIONS</b>			
Intestine Small Note: LYMPH MAL MIXD TGLs = 1-2	Jejunum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Liver		Fatty Change	Focal, Minimal
<b>PRIMARY CAUSE OF DEATH</b>	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 21

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Ovary	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Stomach - Forestomach
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Thymus

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
	Cortex	Hypertrophy	Minimal
Lung		Hemorrhage	Mild
Note: HEMORRHAGE	TGLs = 1-1		
Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Glandular	Inflammation	Chronic Active, Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 21

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Islets, Pancreatic
Kidney	Lung	Mammary Gland	Nose
Oviduct	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea			

MISSING

Lymph Node - Mandibular	Urinary Bladder
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
Bone Marrow		Myelofibrosis	Mild
Brain		Mineralization	Minimal
Intestine Small	Jejunum	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 3-6			
Liver		Lymphoma Malignant Mixed	
Lymph Node	Lumbar	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 4-2			
Note: LYMPH MAL MIXD TGLs = 5-4			
Note: LYMPH MAL MIXD TGLs = 2-5			
Note: LYMPH MAL MIXD TGLs = 6-5			
Ovary		Lymphoma Malignant Mixed	
Note: CYSTIC DEGENERATION OF ONE OVARY.			
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Lymphoma Malignant Mixed	
Thymus		Lymphoma Malignant Mixed	
Uterus	Endometrium	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 21

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 732

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 22

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Gallbladder

Liver

Stomach - Forestomach

Stomach - Glandular

**OBSERVATIONS**

Intestine Small

Jejunum, Lymphoid Nodul

Lymphoma Malignant Mixed

Note: LYMPH MAL MIXD TGLs = 4-2

Spleen

Hematopoietic Cell Proliferation

Mild

Lymphoma Malignant Mixed

Note: LYMPH MAL MIXD TGLs = 5-2

Uterus

Endometrium

Hyperplasia

Mild

Inflammation

Chronic Active, Minimal

Leiomyoma

Note: HYPERPLASIA TGLs = 1-3

[ Hyperplasia TGLs = 3-3 ]

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 22

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Lymph Node	Pancreatic	Hematopoietic Cell Proliferation	Minimal
Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Forestomach	Edema	Minimal
	Forestomach	Hyperkeratosis	Minimal
	Forestomach	Inflammation	Chronic Active, Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 22

TRT#: 7

SEX: Female

DAY ON TEST: 696

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Brain	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Mammary Gland	Nose	Oviduct
Salivary Glands	Skin	Stomach - Forestomach	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Parathyroid Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
	Cortex	Lymphoma Malignant Histiocytic	
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
Bone Marrow		Lymphoma Malignant Histiocytic	
Kidney		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST	TGLs = 4-3		
Liver		Lymphoma Malignant Histiocytic	
		Necrosis	Mild
Note: LYMPH MAL HIST	TGLs = 3-2		
Lung		Lymphoma Malignant Histiocytic	
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mandibular	Lymphoma Malignant Histiocytic	
	Mediastinal	Lymphoma Malignant Histiocytic	
	Mesenteric	Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST	TGLs = 5-5		
Ovary		Lymphoma Malignant Histiocytic	
Pancreas		Lymphoma Malignant Histiocytic	
Pituitary Gland		Lymphoma Malignant Histiocytic	
Spleen		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST	TGLs = 1-3		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 22

**TRT#:** 7  
**DOSE:** CONTROL

**SEX:** Female  
**DISP:** Moribund

**DAY ON TEST:** 696  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: MUCH OF THE NORMAL TISSUE OBLITERATED

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Stomach	Glandular	Mineralization	Minimal
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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 23	TRT#: 4 DOSE: 2.5%	SEX: Female DISP: Moribund	DAY ON TEST: 718 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Gallbladder	Salivary Glands	Stomach - Forestomach	Stomach - Glandular
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OBSERVATIONS

Liver		Lymphoma Malignant Histiocytic	
Lymph Node	Lumbar	Lymphoma Malignant Histiocytic	
	Mandibular	Lymphoma Malignant Histiocytic	
	Mediastinal	Lymphoma Malignant Histiocytic	
	Renal	Lymphoma Malignant Histiocytic	

Note: LYMPH MAL HIST TGLs = 3-1  
Note: LYMPH MAL HIST TGLs = 10-3,11-3  
Note: LYMPH MAL HIST TGLs = 8-4,9-4  
Note: LYMPH MAL HIST TGLs = 1-2,2-2

Spinal Cord		Lymphoma Malignant Histiocytic	
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Histiocytic	

[ Hematopoietic Cell Proliferation TGLS = 6-2 ]

Uterus	Endometrium	Hyperplasia	Moderate
		Lymphoma Malignant Histiocytic	

Note: LYMPH MAL HIST TGLs = 5-5  
Note: HYPERPLASIA TGLs = 4-5

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PRIMARY CAUSE OF DEATH

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-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 23

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Islets, Pancreatic  
Oviduct  
Salivary Glands  
Urinary Bladder

Bone  
Gallbladder  
Intestine Small - Duodenum  
Lung  
Pancreas  
Stomach - Glandular

Bone Marrow  
Heart  
Intestine Small - Ileum  
Nose  
Parathyroid Gland  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Ovary  
Pituitary Gland  
Trachea

MISSING

Intestine Large - Rectum

Mammary Gland

Skin

OBSERVATIONS

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hyperplasia  
Lymphoma Malignant Mixed

Moderate  
Moderate

Kidney

Note: LYMPH MAL MIXD TGLs = 4-3,5-3

Liver

Lymph Node

Mandibular  
Mesenteric

Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed

Note: LYMPH MAL MIXD TGLs = 3-5

Spleen

Hematopoietic Cell Proliferation  
Lymphoma Malignant Mixed

Minimal

Note: LYMPH MAL MIXD TGLs = 2-3

Stomach

Thymus

Uterus

Forestomach

Endometrium

Hyperkeratosis  
Lymphoma Malignant Mixed  
Hyperplasia

Minimal

Mild

Note: HYPERPLASIA TGLs = 6-4+4.1

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 23

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Ovary	Oviduct	Pancreas	Pituitary Gland
Salivary Glands	Skin	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Nose	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Spleen	Lymph Follic	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 3-3			
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild
	Forestomach	Squamous Cell Papilloma	
Note: PAPILLOMA SQUA TGLs = 4-3			
Note: HYPERKERATOSIS TGLs = 4-3			
Note: ? SQUAMOUS CELL PAPILLOMA ?			
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 2-4			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 4

DOSE: 2.5%

SEX: Female

DISP: Moribund

DAY ON TEST: 662

HISTO:

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	Nose	Oviduct	Parathyroid Gland
Pituitary Gland	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Uterus	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Gallbladder		Lymphoma Malignant Mixed	
Kidney		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 8-3		
Liver		Hepatocellular Adenoma	
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 5-2,6-2,7-2		
Note: HEPATOCLR ADEN	TGLs = 4-2		
Lung		Lymphoma Malignant Mixed	
Lymph Node	Lumbar	Lymphoma Malignant Mixed	
	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 1-5,9-4,10-4,11-9,12-9		
Ovary		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-4,3-4		
Pancreas	Acinus	Atrophy	Minimal
		Lymphoma Malignant Mixed	
Salivary Glands		Lymphoma Malignant Mixed	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 24

**TRT#:** 4

**DOSE:** 2.5%

**SEX:** Female

**DISP:** Moribund

**DAY ON TEST:** 662

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen	Hematopoietic Cell Proliferation	Mild
	Lymphoma Malignant Mixed	
Thymus	Lymphoma Malignant Mixed	
Urinary Bladder	Lymphoma Malignant Mixed	

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Salivary Glands  
Thymus

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Oviduct  
Skin  
Thyroid Gland

**OBSERVATIONS**

Adrenal Gland  
  
Kidney  
    Note: HISTIO SARC    TGLs = 2-3  
  
Liver  
Lymph Node  
Pancreas  
Spleen  
Uterus  
  
    Note: HISTIO SARC    TGLs = 1-4.1

Capsule  
Cortex  
  
  
Mesenteric

Hyperplasia  
Hyperplasia  
Histiocytic Sarcoma  
  
Histiocytic Sarcoma  
Hematopoietic Cell Proliferation  
Histiocytic Sarcoma  
Hematopoietic Cell Proliferation  
Histiocytic Sarcoma  
Necrosis

Mild  
Mild  
Metastatic (Uterus)  
  
Metastatic (Uterus)  
Minimal  
Metastatic (Uterus)  
Mild  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Islets, Pancreatic  
Lymph Node - Mandibular  
Oviduct  
Skin  
Thymus  
Uterus

Bone  
Gallbladder  
Intestine Large - Rectum  
Kidney  
Lymph Node - Mesenteric  
Pancreas  
Spinal Cord  
Thyroid Gland

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Liver  
Mammary Gland  
Parathyroid Gland  
Spleen  
Trachea

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

**MISSING**

Intestine Small - Ileum

**OBSERVATIONS**

Adrenal Gland  
  
Ovary  
Pituitary Gland  
Stomach

Capsule  
Cortex  
  
Pars Distalis  
Forestomach  
Forestomach

Hyperplasia  
Hyperplasia  
Cyst  
Adenoma  
Hyperkeratosis  
Inflammation

Mild  
Mild  
  
  
Mild  
Chronic Active, Minimal

Note: HYPERKERATOSIS TGLs = 1-3

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 25

TRT#: 4

SEX: Female

DAY ON TEST: 586

DOSE: 2.5%

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Liver	Lung
Nose	Pancreas	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Intestine Small	Ileum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 4-7			
Lymph Node	Mandibular	Hematopoietic Cell Proliferation	Mild
	Mesenteric	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 5-6			
Mammary Gland		Adenocarcinoma	
Note: ADENOCARC TGLs = 1-2+11			
Ovary		Degeneration	Cystic, Moderate
Note: DEGEN TGLs = 2-5			
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: MEGAKARYOCYTES INCREASED			
Note: HEMA CELL PROL TGLs = 3-4			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 25

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Oviduct  
Skin  
Urinary Bladder

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Pancreas  
Thymus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Parathyroid Gland  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Salivary Glands  
Trachea

**MISSING**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland  
  
Liver

Capsule  
Cortex

Hyperplasia  
Hyperplasia  
Eosinophilic Focus  
Fatty Change

Minimal  
Minimal  
  
Focal, Minimal

Note: PROBABLE ADENOMA IN THE SECTION CIRCLED.

Lung  
Spleen  
Stomach

Forestomach  
Glandular  
Endometrium

Alveolar/Bronchiolar Adenoma  
Hematopoietic Cell Proliferation  
Acanthosis  
Inflammation  
Hyperplasia

Minimal  
Minimal  
Chronic Active, Minimal  
Mild

Note: HYPERPLASIA TGLs = 3-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 25

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Esophagus	Gallbladder
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
Oviduct	Pancreas	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Parathyroid Gland	Pituitary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Bone Marrow		Myelofibrosis	Mild
Brain		Mineralization	Mild
Ovary			
Note: CYSTIC DEGENERATION			
Spleen		Hematopoietic Cell Proliferation	Minimal
Note: SUGGESTION OF A LYMPHOMA			
Uterus	Endometrium	Hyperplasia	Mild
[ Hyperplasia TGLS = 2-4 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 26	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Intestine Small - Jejunum	Liver	Pancreas
Stomach - Forestomach	Stomach - Glandular		

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**OBSERVATIONS**

Intestine Small Note: HYPERPLASIA TGLs = 2-3	Duodenum, Lymphoid Nodul	Hyperplasia	Mild
Kidney Note: LYMPH MAL MIXD TGLs = 4-2		Lymphoma Malignant Mixed	
Lymph Node Note: LYMPH MAL MIXD TGLs = 3-3	Mesenteric	Lymphoma Malignant Mixed	
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus Note: HYPERPLASIA TGLs = 1-3	Endometrium	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 26

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Rectum	Intestine Small - Duodenum	Islets, Pancreatic	Kidney
Liver	Lung	Mammary Gland	Nose
Oviduct	Parathyroid Gland	Pituitary Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Intestine Large	Colon	Lymphoma Malignant Mixed	
Intestine Small	Ileum	Lymphoma Malignant Mixed	
	Jejunum	Lymphoma Malignant Mixed	
Lymph Node	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 3-5+5.1			
Ovary		Degeneration	Cystic, Mild
Note: CYSTIC DEGENERATION.			
Pancreas		Necrosis	Mild
Spleen		Hematopoietic Cell Proliferation	Minimal
Thymus		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 4-5.1			
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 26	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Heart	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Ileum	Islets, Pancreatic	Kidney	Lung
Lymph Node - Mandibular	Ovary	Oviduct	Pancreas
Pituitary Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Trachea	Uterus	

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**MISSING**

Esophagus	Nose	Thyroid Gland	
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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Jejunum
Parathyroid Gland	Stomach - Glandular	Thymus	Urinary Bladder

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**OBSERVATIONS**

Liver		Necrosis	Moderate
Lymph Node	Mesenteric	Angiectasis	Minimal
Mammary Gland		Adenocarcinoma	

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 27

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: 2.5%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Gallbladder  
Stomach - Forestomach

Islets, Pancreatic

Liver

Spleen

**OBSERVATIONS**

Mesentery  
Note: NECROSIS TGLs = 2-3

Fat

Necrosis

Marked

Pancreas

Acinus

Atrophy

Marked

Cyst

Note: CYST TGLs = 1-2

Stomach

Glandular

Inflammation

Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 27	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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
Oviduct	Pancreas	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

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**MISSING**

Mammary Gland

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Liver		Clear Cell Focus	
Note: POSSIBILITY OF A LIPOMA TO BE CONSIDERED.			
Note: CLEAR CL FOCUS TGLs = 3-2			
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 1-4			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 27

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Gallbladder	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Lung	Mammary Gland
Oviduct	Pancreas	Pituitary Gland	Salivary Glands
Skin	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Intestine Small - Duodenum	Nose	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 1-9		
Kidney		Lymphoma Malignant Mixed	
Liver		Hepatocellular Adenoma	
		Lymphoma Malignant Mixed	
		Necrosis	Minimal
Lymph Node	Mandibular	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-5,4-1		
Ovary		Cyst	
Note: CYSTIC DEGENERATION OF ONE OVARY			
Spleen		Hematopoietic Cell Proliferation	Minimal
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 5-3		
Stomach	Forestomach	Hyperkeratosis	Minimal
Uterus	Endometrium	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 27

**TRT#:** 7  
**DOSE:** CONTROL

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 732  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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<b>ANIMAL ID:</b> 28	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 568 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Intestine Small - Ileum	Kidney
Ovary	Pituitary Gland	Skin	Stomach - Forestomach
Thymus	Trachea	Uterus	

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**MISSING**

Islets, Pancreatic	Lymph Node - Mandibular	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Salivary Glands	

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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Jejunum	Lymph Node - Mesenteric	Stomach - Glandular

---

**OBSERVATIONS**

Heart		Lymphoma Malignant
Liver		Lymphoma Malignant
Lung		Lymphoma Malignant
Lymph Node	Lumbar	Lymphoma Malignant
	Renal	Lymphoma Malignant
Note: LYMPH MAL	TGLs = 3-11,4-11,5-12,6-12	
Spleen		Lymphoma Malignant
Note: LYMPH MAL	TGLs = 2-4	
Thyroid Gland		Lymphoma Malignant
Urinary Bladder		Lymphoma Malignant

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**PRIMARY CAUSE OF DEATH**

-

Animal Note: LYMPHOMA CANNOT BE CLASSIFIED AS TISSUES ARE AUTOLYZED

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 28

TRT#: 5

SEX: Female

DAY ON TEST: 730

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Oviduct  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Heart  
Intestine Small - Duodenum  
Liver  
Mammary Gland  
Salivary Glands  
Thymus

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Nose  
Skin  
Thyroid Gland

OBSERVATIONS

Adrenal Gland  
Bone Marrow  
Kidney  
Ovary

Capsule

Hyperplasia  
Myelofibrosis  
Cyst  
Angiectasis  
Hemorrhage

Mild  
Mild  
Moderate  
Mild

Note: ? HEMANGIOMA. OTHER OVARY IS NORMAL

Note: ANGIECTASIS TGLs = 3-4

Pancreas

Fibrosis  
Inflammation  
Hyperplasia  
Hematopoietic Cell Proliferation  
Developmental Malformation  
Inflammation

Minimal  
Chronic Active, Moderate  
Minimal  
Minimal  
Acute, Minimal

Pituitary Gland  
Spleen  
Tooth

Pars Distalis  
Incisor  
Incisor

Note: DEVELOP MALFOR TGLs = 2-9

Uterus

Endometrium

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 28

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Islets, Pancreatic  
Nose  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Bone  
Gallbladder  
Intestine Large - Rectum  
Kidney  
Ovary  
Pituitary Gland  
Stomach - Glandular

Bone Marrow  
Heart  
Intestine Small - Ileum  
Lung  
Oviduct  
Salivary Glands  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Mammary Gland  
Pancreas  
Skin  
Trachea

OBSERVATIONS

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hyperplasia

Mild  
Mild

Intestine Small

Duodenum, Epithelium

Hyperplasia

Minimal

Liver

Lymphoma Malignant Mixed

Note: LYMPH MAL MIXD TGLs = 5-2+2.1

Lymph Node

Lumbar  
Mandibular  
Mediastinal  
Mesenteric  
Pancreatic

Angiectasis  
Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed  
Lymphoma Malignant Mixed

Moderate

Note: LYMPH MAL MIXD TGLs = 6-5,7-5

[ Angiectasis TGLS = 4-2 ]

Spleen

Lymphoma Malignant Mixed

Note: LYMPH MAL MIXD TGLs = 2-3

Thymus

Lymphoma Malignant Mixed

Uterus

Endometrium

Angiectasis  
Hyperplasia  
Polyp Stromal

Mild  
Mild

Note: HYPERPLASIA TGLs = 3-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 29

TRT#: 4

SEX: Female

DAY ON TEST: 521

DOSE: 2.5%

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Skin

Bone  
Heart  
Intestine Small - Duodenum  
Nose  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Parathyroid Gland  
Thyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Salivary Glands  
Trachea

AUTO PRECLUDES DIAG.

Gallbladder

OBSERVATIONS

Adrenal Gland

Cortex

Lymphoma Malignant Lymphocytic

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

Kidney

Lymphoma Malignant Lymphocytic

Liver

Lymphoma Malignant Lymphocytic

Lung

Lymphoma Malignant Lymphocytic

Note: LYMPH MAL LYMP TGLs = 4-1

Lymph Node

Axillary

Lymphoma Malignant Lymphocytic

Lumbar

Lymphoma Malignant Lymphocytic

Mandibular

Lymphoma Malignant Lymphocytic

Mediastinal

Lymphoma Malignant Lymphocytic

Mesenteric

Lymphoma Malignant Lymphocytic

Pancreatic

Lymphoma Malignant Lymphocytic

Renal

Lymphoma Malignant Lymphocytic

Note: LYMPH MAL LYMP TGLs = 10-11

Note: LYMPH MAL LYMP TGLs = 11-11

Note: LYMPH MAL LYMP TGLs = 5-12

Note: LYMPH MAL LYMP TGLs = 9-6

Note: LYMPH MAL LYMP TGLs = 8-6

Note: LYMPH MAL LYMP TGLs = 2-2

Note: LYMPH MAL LYMP TGLs = 12-11

Mammary Gland

Adenoacanthoma

Note: ADENOACANTHOMA TGLs = 1-2

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

**ANIMAL ID:** 29

**TRT#:** 4

**DOSE:** 2.5%

**SEX:** Female

**DISP:** Dead

**DAY ON TEST:** 521

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Ovary		Lymphoma Malignant Lymphocytic
Pancreas		Lymphoma Malignant Lymphocytic
Pituitary Gland		Lymphoma Malignant Lymphocytic
Skeletal Muscle		Lymphoma Malignant Lymphocytic
Spleen		Lymphoma Malignant Lymphocytic
Note: LYMPH MAL LYMP	TGLs = 7-4	
Stomach	Forestomach	Hyperkeratosis
Thymus		Lymphoma Malignant Lymphocytic
Urinary Bladder		Lymphoma Malignant Lymphocytic
Uterus		Lymphoma Malignant Lymphocytic
Note: LYMPH MAL LYMP	TGLs = 6-5	

Mild

**PRIMARY CAUSE OF DEATH**

-

Animal Note: BECAUSE OF A UNIFORM POPULATION OF CELLS AND STARRY-

Animal Note: SKIED PATTERN

Animal Note: NEOPLASM IN THIS ANIMAL IS CALLED LYMPHOCYTIC LYMPHOMA

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 29

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Gallbladder	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Kidney	Liver	Lung	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Ovary
Oviduct	Pancreas	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder
Uterus			

**MISSING**

Adrenal Gland - Medulla	Intestine Large - Rectum
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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<b>ANIMAL ID:</b> 29	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 733 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Lymph Node	Mediastinal	Angiectasis	Moderate
Note: ANGIECTASIS TGLs = 3-5			
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild
[ Hyperplasia TGLS = 1-4 ]			

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 30	TRT#: 4 DOSE: 2.5%	SEX: Female DISP: Dead	DAY ON TEST: 714 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Trachea

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AUTO PRECLUDES DIAG.

Gallbladder	Uterus
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OBSERVATIONS

Liver		Fatty Change	Focal, Mild
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 1-3		
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Glandular	Hemorrhage	Minimal
	Forestomach	Hyperkeratosis	Mild
	Glandular	Inflammation	Chronic Active, Mild

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

<b>ANIMAL ID:</b> 30	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Ovary	Oviduct
Pancreas	Parathyroid Gland	Salivary Glands	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Mammary Gland	Nose	Skin
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Eosinophilic Focus	
Ovary			
Note: PROMINENT TALL GERMINAL EPITHELIUM			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Acanthosis	Minimal
	Forestomach	Hyperkeratosis	Minimal
	Glandular	Inflammation	Chronic Active, Mild
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 30

TRT#: 7

SEX: Female

DAY ON TEST: 694

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Intestine Large - Rectum	Intestine Small - Duodenum	Islets, Pancreatic
Kidney	Lung	Mammary Gland	Nose
Ovary	Oviduct	Pancreas	Pituitary Gland
Salivary Glands	Skin	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Parathyroid Gland	Thymus	
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AUTO PRECLUDES DIAG.

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

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Heart		Mineralization	Mild
Intestine Large	Colon, Lymphoid Nodul	Lymphoma Malignant Mixed	
Kidney			
Note: RENAL TUBULAR DEGENERATION OR AUTOLYSIS ?			
Liver		Necrosis	Moderate
Note: MORE LIKE SUBACUTE HEPATIC NECROSIS			
Note: NECROSIS TGLs = 4-2			
Lymph Node	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 7-5			
Spleen		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 3-3			
Stomach	Forestomach	Acanthosis	Mild
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 31	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Liver		Fatty Change	Focal, Minimal
		Lymphoma Malignant Mixed	
Spleen		Hematopoietic Cell Proliferation	Mild
	Lymph Follic	Hyperplasia	Mild
Uterus	Endometrium	Hyperplasia	Mild
[ Hyperplasia TGLS = 2-3 ]			

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31

TRT#: 5

DOSE: 5.0%

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lymph Node - Mandibular	Nose	Ovary	Oviduct
Pancreas	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Lung		Hemorrhage	Minimal
Lymph Node	Mesenteric	Angiectasis	Minimal
	Mesenteric	Hematopoietic Cell Proliferation	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild

Note: ANGIECTASIS TGLs = 1-7

Note: ADENOMA TGLs = 1-7

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31

TRT#: 7

SEX: Female

DAY ON TEST: 654

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Stomach - Glandular  
Uterus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Oviduct  
Skin  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pancreas  
Spleen  
Trachea

**MISSING**

Adrenal Gland - Medulla  
Thymus

Clitoral Gland

Lymph Node - Mandibular

Pituitary Gland

**OBSERVATIONS**

Liver  
Note: HEPATOCLR CARC TGLs = 4-2

Hepatocellular Carcinoma

Lung  
Ovary  
Note: DEGEN TGLs = 3-4

Hemorrhage  
Degeneration

Minimal  
Cystic, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 32	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Spleen	Stomach - Glandular	Uterus
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**OBSERVATIONS**

Liver		Necrosis	Minimal
Ovary		Cyst	
Note: CYST	TGLs = 1-2		
Stomach	Forestomach	Acanthosis	Minimal

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 32

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Nose  
Pituitary Gland  
Stomach - Glandular

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mandibular  
Ovary  
Salivary Glands  
Thymus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Lymph Node - Mesenteric  
Oviduct  
Skin  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Mammary Gland  
Pancreas  
Stomach - Forestomach  
Trachea

**MISSING**

Parathyroid Gland

Urinary Bladder

**OBSERVATIONS**

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hyperplasia

Mild  
Mild

Ovary

Note: CYSTIC DEGENERATION OF ONE OVARY

Spleen

Hematopoietic Cell Proliferation

Minimal

Uterus

Endometrium

Hyperplasia

Mild

Note: HYPERPLASIA TGLs = 2-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 32

TRT#: 7

SEX: Female

DAY ON TEST: 637

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Intestine Large - Cecum	Intestine Large - Colon
Intestine Small - Duodenum	Intestine Small - Jejunum	Islets, Pancreatic	Nose
Ovary	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

MISSING

Intestine Large - Rectum	Intestine Small - Ileum	Mammary Gland	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	

OBSERVATIONS

Adrenal Gland	Cortex	Hematopoietic Cell Proliferation	Mild
	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Note: HEMA CELL PROL TGLs = 4-7			
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
Heart		Lymphoma Malignant Histiocytic	
Kidney		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 5-3			
Liver		Lymphoma Malignant Histiocytic	
		Mineralization	Minimal
Note: LYMPH MAL HIST TGLs = 6-2			
Lung		Lymphoma Malignant Histiocytic	
Lymph Node	Mesenteric	Angiectasis	Mild
	Mandibular	Hematopoietic Cell Proliferation	Mild
	Mesenteric	Hematopoietic Cell Proliferation	Moderate
Note: ANGIECTASIS TGLs = 2-5			
Spleen		Hematopoietic Cell Proliferation	Moderate
		Lymphoma Malignant Histiocytic	
Note: LYMPH MAL HIST TGLs = 3-3			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 32

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 637

**DOSE:** CONTROL

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 33

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Gallbladder

Stomach - Forestomach

Stomach - Glandular

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**OBSERVATIONS**

Liver

Clear Cell Focus

Spleen

Lymph Follic

Hyperplasia

Mild

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 33

TRT#: 5

DOSE: 5.0%

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Lung	Nose
Ovary	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Trachea	Urinary Bladder	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Kidney		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 6-3		
Liver		Lymphoma Malignant Mixed	
Lymph Node	Lumbar	Lymphoma Malignant Mixed	
	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-5,3-5,5-5,7-2,8-6		
Spleen		Hematopoietic Cell Proliferation	Minimal
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 4-3		
Thymus		Lymphoma Malignant Mixed	
Thyroid Gland		Lymphoma Malignant Mixed	
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 10-4		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 33

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 732

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Islets, Pancreatic  
Mammary Gland  
Pancreas  
Stomach - Forestomach  
Urinary Bladder

Bone  
Gallbladder  
Intestine Large - Rectum  
Kidney  
Nose  
Parathyroid Gland  
Stomach - Glandular  
Uterus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Salivary Glands  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Oviduct  
Skin  
Trachea

**OBSERVATIONS**

Adrenal Gland  
Intestine Small  
    Note: LYMPH MAL MIXD   TGLs = 1-6  
Liver  
Lymph Node  
Pituitary Gland  
Spleen  
Thymus

Capsule  
Cortex  
Ileum, Lymphoid Nodul  
Mesenteric  
Pars Distalis  
Pars Distalis

Hyperplasia  
Hyperplasia  
Lymphoma Malignant Mixed  
Clear Cell Focus  
Pigmentation  
Lymphoma Malignant Mixed  
Angiectasis  
Hyperplasia  
Hematopoietic Cell Proliferation  
Lymphoma Malignant Mixed

Mild  
Mild  
Minimal  
Minimal  
Minimal  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 34

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 731

**DOSE:** 2.5%

**DISP:** Terminal Sacrifice

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Gallbladder

Spleen

Stomach - Forestomach

Stomach - Glandular

---

**OBSERVATIONS**

Liver

Lymphoma Malignant Mixed

Note: LYMPH MAL MIXD TGLs = 2-1

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 34

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Trachea

Bone  
Gallbladder  
Intestine Large - Rectum  
Kidney  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Liver  
Nose  
Pituitary Gland  
Thymus

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Oviduct  
Salivary Glands  
Thyroid Gland

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland  
  
Islets, Pancreatic  
Ovary  
Spleen  
Stomach  
Uterus

Capsule  
Cortex  
  
  
Glandular  
Endometrium

Hyperplasia  
Hyperplasia  
Adenoma  
Cyst  
Hematopoietic Cell Proliferation  
Inflammation  
Hyperplasia

Mild  
Mild  
  
Minimal  
Chronic Active, Minimal  
Mild

Note: HYPERPLASIA TGLs = 2-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 34

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Esophagus	Gallbladder
Heart	Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Lymph Node - Mesenteric	Mammary Gland	Nose	Ovary
Oviduct	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Adrenal Gland - Medulla	Intestine Large - Rectum	Lymph Node - Mandibular
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
Bone Marrow		Myelofibrosis	Mild
Brain		Mineralization	Mild
Harderian Gland		Carcinoma	
Note: CARCINOMA TGLs = 1-9			
Liver		Hepatocellular Adenoma	
Note: HEPATOCLR ADEN TGLs = 9-2			
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 3-1		Carcinoma	Metastatic (Harderian Gland)
Pancreas		Inflammation	Chronic Active, Moderate
Note: INFLAMMATION TGLs = 5-5			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Minimal
Note: HYPERPLASIA TGLs = 2-4			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 35	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Liver	Spleen	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Gallbladder		Inflammation	Acute, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild

Note: ADENOMA TGLs = 2-3

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

<b>ANIMAL ID:</b> 35	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 731 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct
Pancreas	Pituitary Gland	Salivary Glands	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland	Parathyroid Gland	Skin
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Kidney	Papilla	Mineralization	Minimal
Liver		Basophilic Focus	
Spleen		Hematopoietic Cell Proliferation	Minimal
	Lymph Follic	Hyperplasia	Moderate
Note: PROBABLE LYMPHOMA.			
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 35

TRT#: 7

SEX: Female

DAY ON TEST: 338

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Kidney  
Nose  
Pituitary Gland  
Thymus  
Uterus

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Ileum  
Liver  
Oviduct  
Salivary Glands  
Thyroid Gland

Bone  
Heart  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

MISSING

Intestine Large - Rectum

Intestine Small - Duodenum

Mammary Gland

AUTO PRECLUDES DIAG.

Gallbladder

OBSERVATIONS

Lung  
Ovary

Edema  
Hemorrhage  
Teratoma Malignant

Mild  
Mild

Note: AND POSSIBLY OPTIC CUP CAN BE RECOGNIZED.

Note: THIS OVARY HAS ONE NEOPLASM - A TERATOMA. IN THE

Note: EPITHELIA, NEURAL AND OSSEOUS ELEMENTS, MELANIN,

Note: TERATOMATOUS COMPONENT GLANDULAR AND SQUAMOUS

Note: TERATOMA MAL TGLs = 1-5.1

Note: THIS OVARY HAS ONE NEOPLASM - A TERATOMA. IN THE

Note: TERATOMATOUS COMPONENT GLANDULAR AND SQUAMOUS

Note: EPITHELIAL, NEURAL AND OSSEOUS ELEMENTS, MELANIN,

Note: AND POSSIBLY OPTIC CUP CAN BE RECOGNIZED.

Spleen

Hematopoietic Cell Proliferation

Mild

Stomach

Forestomach

Hyperkeratosis

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 36	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Liver	Lymph Node - Mesenteric	Spleen
Stomach - Glandular			

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**OBSERVATIONS**

Mesentery	Fat	Necrosis	Moderate
Stomach	Forestomach	Acanthosis	Moderate
	Forestomach	Hyperkeratosis	Mild

Note: ACANTHOSIS TGLs = 4-2

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 36

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Ovary	Oviduct	Pancreas	Parathyroid Gland
Pituitary Gland	Salivary Glands	Skin	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Thymus

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Lung	Alveolar Epith	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Forestomach	Squamous Cell Papilloma	
Note: EARLY SQUAMOUS CELL PAPILLOMA WITH STOCK CUT OFF			
Note: PAPILLOMA SQUA TGLs = 4-3			
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 3-4.1			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 36

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Kidney	Liver	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Oviduct	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skin	Stomach - Forestomach	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Islets, Pancreatic	Mammary Gland	Pancreas	
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Heart		Adenocarcinoma	Metastatic (Uterus)
		Thrombosis	
Lung		Adenocarcinoma	Metastatic (Uterus)
		Hemorrhage	Mild
		Infiltration Cellular	Histiocyte, Mild
Note: ADENOCARC	TGLs = 6-1		
Ovary		Adenocarcinoma	Metastatic (Uterus)
		Cyst	
Note: CYST	TGLs = 2-4.1		
Note: ADENOCARC	TGLs = 4-4.1		
Spleen		Hematopoietic Cell Proliferation	Minimal
	Lymph Follic	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 7-3		
Stomach	Glandular	Mineralization	Minimal
Uterus		Adenocarcinoma	
Note: ADENOCARC	TGLs = 3-4+4.1,5-4+4.1		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 37

TRT#: 4

DOSE: 2.5%

SEX: Female

DISP: Dead

DAY ON TEST: 568

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Islets, Pancreatic  
Skin

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Oviduct  
Thyroid Gland

Bone  
Heart  
Intestine Small - Duodenum  
Pancreas  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Parathyroid Gland

MISSING

Lymph Node - Mandibular  
Thymus

Lymph Node - Mesenteric

Mammary Gland

Nose

AUTO PRECLUDES DIAG.

Gallbladder

OBSERVATIONS

Intestine Small  
Kidney

Ileum  
Papilla

Lymphoma Malignant Undifferentiated Cell Type  
Lymphoma Malignant Undifferentiated Cell Type  
Mineralization  
Lymphoma Malignant Undifferentiated Cell Type

Minimal

Liver  
Note: LYMPH MAL UNDF TGLs = 3-3  
Lung  
Note: LYMPH MAL UNDF TGLs = 5-1

Lymphoma Malignant Undifferentiated Cell Type

Ovary  
Pituitary Gland  
Salivary Glands  
Skeletal Muscle  
Spleen

Pars Distalis

Lymphoma Malignant Undifferentiated Cell Type  
Hyperplasia  
Lymphoma Malignant Undifferentiated Cell Type  
Lymphoma Malignant Undifferentiated Cell Type  
Lymphoma Malignant Undifferentiated Cell Type

Minimal

[ Lymphoma Malignant Undifferentiated Cell Type TGLS = 1-4 ]  
Stomach  
Forestomach  
Glandular  
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.

Hyperkeratosis  
Lymphoma Malignant Undifferentiated Cell Type

Mild

Urinary Bladder  
Uterus

Lymphoma Malignant Undifferentiated Cell Type  
Lymphoma Malignant Undifferentiated Cell Type

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 37

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 568

**DOSE:** 2.5%

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 37

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Nose	Ovary
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Basophilic Focus	
Note: BASOPH FOCUS	TGLs = 2-2		
Lung	Alveolar Epith	Alveolar/Bronchiolar Adenoma	
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Acanthosis	Minimal
	Forestomach	Hyperkeratosis	Minimal
	Glandular	Hyperplasia	Mild
	Glandular	Inflammation	Chronic Active, Mild
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 1-4		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 37

TRT#: 7

SEX: Female

DAY ON TEST: 522

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Nose	Oviduct
Pancreas	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Dsc Limb Hen	Lymphoma Malignant Undifferentiated Cell Type
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.		
Kidney		Lymphoma Malignant Undifferentiated Cell Type
Liver		Lymphoma Malignant Undifferentiated Cell Type
Note: LYMPH MAL UNDF TGLs = 7-3		
Lung		Lymphoma Malignant Undifferentiated Cell Type
Note: LYMPH MAL UNDF TGLs = 4-1		
Lymph Node	Mandibular	Lymphoma Malignant Undifferentiated Cell Type
	Mesenteric	Lymphoma Malignant Undifferentiated Cell Type
	Pancreatic	Lymphoma Malignant Undifferentiated Cell Type
Note: LYMPH MAL UNDF TGLs = 1-2		
Note: LYMPH MAL UNDF TGLs = 8-6		
Note: THIS COULD AS WELL BE A LYMPHOCYTIC LYMPHOMA		
Ovary		Cyst
		Lymphoma Malignant Undifferentiated Cell Type
Note: CYST TGLs = 5-5		
Spleen		Lymphoma Malignant Undifferentiated Cell Type
Note: LYMPH MAL UNDF TGLs = 6-4		
Thymus		Lymphoma Malignant Undifferentiated Cell Type
Urinary Bladder		Lymphoma Malignant Undifferentiated Cell Type
Uterus	Endometrium	Hyperplasia
		Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 37

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 522

**DOSE:** CONTROL

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 38

TRT#: 4

SEX: Female

DAY ON TEST: 634

DOSE: 2.5%

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Kidney  
Nose  
Parathyroid Gland  
Spleen  
Urinary Bladder

Bone  
Gallbladder  
Intestine Small - Duodenum  
Liver  
Ovary  
Pituitary Gland  
Stomach - Forestomach  
Uterus

Bone Marrow  
Heart  
Intestine Small - Ileum  
Lung  
Oviduct  
Salivary Glands  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Pancreas  
Skin  
Trachea

**MISSING**

Intestine Large - Rectum

Lymph Node - Mandibular

Mammary Gland

**AUTO PRECLUDES DIAG.**

Intestine Small - Jejunum

**OBSERVATIONS**

Adrenal Gland  
  
Stomach  
  
Thymus

Capsule  
Cortex  
Glandular  
Glandular

Hyperplasia  
Hyperplasia  
Inflammation  
Mineralization  
Hyperplasia

Mild  
Mild  
Chronic Active, Minimal  
Minimal  
Lymphoid, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 38

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Brain

Esophagus

Gallbladder

Intestine Large - Cecum

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

Oviduct

Pancreas

Salivary Glands

Skin

Stomach - Forestomach

Stomach - Glandular

Thymus

Thyroid Gland

Trachea

Urinary Bladder

**MISSING**

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland

Capsule

Hyperplasia

Mild

Bone Marrow

Myelofibrosis

Minimal

Heart

Inflammation

Chronic Active, Minimal

Intestine Large

Colon

Parasite

Minimal

Mammary Gland

Adenocarcinoma

Note: ADENOCARC TGLs = 2-9

Note: THE SKIN MASS IS MAMMARY GLAND

Pituitary Gland

Pars Distalis

Adenoma

Spleen

Hematopoietic Cell Proliferation

Mild

Uterus

Endometrium

Hyperplasia

Mild

Note: HYPERPLASIA TGLs = 3-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 38

TRT#: 7

SEX: Female

DAY ON TEST: 549

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Oviduct  
Skin  
Trachea

Adrenal Gland - Medulla  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Pancreas  
Spleen  
Uterus

Bone  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Parathyroid Gland  
Stomach - Forestomach

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Ovary  
Salivary Glands  
Thyroid Gland

MISSING

Thymus

AUTO PRECLUDES DIAG.

Stomach - Glandular

Urinary Bladder

OBSERVATIONS

Brain

Carcinoma

Metastatic (Pituitary Gland)

Note: THIS IS AN INVASIVE RATHER THAN A METASTATIC TUMOR

Note: THE TUMOR CELLS HAVE INFILTRATED INTO THE VENTRICLES.

Note: CARCINOMA TGLs = 3-5

Liver

Fatty Change

Diffuse, Mild

Mammary Gland

Acinus

Hyperplasia

Mild

Note: HYPERPLASIA TGLs = 1-11

Pituitary Gland

Pars Distalis

Angiectasis

Mild

Pars Distalis

Carcinoma

Note: PITUITARY TUMOR, THE POSSIBILITY OF IT BEING

Note: A PINEALOMA HAS TO BE CONSIDERED

Note: ALTHOUGH THIS NEOPLASM IS DIAGNOSED AS A

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 39

**TRT#:** 4  
**DOSE:** 2.5%

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 732  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Gallbladder	Liver	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Spleen	Lymph Follic	Hyperplasia	Mild
Uterus	Endometrium	Hyperplasia	Moderate

[ Hyperplasia TGLS = 1-2 ]

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 39

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Gallbladder	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	Mammary Gland	Nose
Oviduct	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Harderian Gland		Adenoma	
Note: ADENOMA TGLs = 8-9			
Note: MORE LIKE CARCINOMA			
Liver		Lymphoma Malignant Mixed	
Lymph Node	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
Note: HAS FEATURES OF LYMPHOCYTIC LYMPHOMA			
Note: LYMPH MAL MIXD TGLs = 5-5,6-5			
Ovary		Cyst	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 2-3			
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 3-4.1			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 39

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Oviduct
Pituitary Gland	Salivary Glands	Skin	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Kidney			
Note: CLUSTERS OF MONONUCLEAR CELLS			
Lung	Alveolar Epith	Hyperplasia Inflammation	Mild Chronic Active, Mild
Note: HYPERPLASIA TGLs = 2-1			
Ovary		Cyst	
Note: CYST TGLs = 3-4			
Pancreas	Acinus	Hypertrophy	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Hyperkeratosis	Minimal
	Glandular	Inflammation	Chronic Active, Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 40

**TRT#:** 4  
**DOSE:** 2.5%

**SEX:** Female  
**DISP:** Dead

**DAY ON TEST:** 696  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder  
Stomach - Glandular

Liver

Spleen

Stomach - Forestomach

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**OBSERVATIONS**

Ovary  
Note: DEGEN      TGLs = 1-2

Degeneration

Cystic, Mild

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 40

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 2-7		
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Minimal
Note: HYPERPLASIA	TGLs = 3-4		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 40

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 2-9		
Liver		Hemangiosarcoma	
Note: HEMANGIOSARC	TGLs = 3-2		
Ovary		Hyperplasia	Papillary, Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 41

**TRT#:** 4  
**DOSE:** 2.5%

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 732  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder  
Stomach - Glandular

Liver

Spleen

Stomach - Forestomach

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**OBSERVATIONS**

Uterus  
Note: HYPERPLASIA TGLs = 2-2

Endometrium

Hyperplasia

Mild

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 41

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Moderate
	Cortex	Hyperplasia	Mild
Harderian Gland		Adenoma	
Note: ADENOMA TGLs = 3-9			
Ovary		Cystadenoma	
		Necrosis	Mild
Note: CYSTADENOMA TGLs = 1-4.1			
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 4-7			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 2-3			
Thyroid Gland	Follicular Cel	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 41

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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 - Mesenteric	Ovary	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

**MISSING**

Mammary Gland	Nose	Thymus
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Liver		Basophilic Focus	
Note: SUGGESTION OF AN ADENOMA IN THE SECTION CIRCLED			
Lymph Node	Mandibular	Hyperplasia	Lymphoid, Mild
Note: HYPERPLASIA TGLs = 2-5			
Note: CYSTIC DEGENERATION OF THE MANDIBULAR NODE			
Spleen		Hematopoietic Cell Proliferation	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

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ANIMAL ID: 42	TRT#: 4 DOSE: 2.5%	SEX: Female DISP: Dead	DAY ON TEST: 728 HISTO:
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ORGAN AND ACCOUNTABLE SITE STATUS

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NORMAL

Spleen	Stomach - Forestomach	Stomach - Glandular	Trachea
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AUTO PRECLUDES DIAG.

Gallbladder

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OBSERVATIONS

Liver	Hepatocellular Adenoma	
Lung	Alveolar/Bronchiolar Carcinoma Infiltration Cellular	Histiocyte, Mild

Note: PLANT MATERIAL IN A BRONCHIOLE  
[ Alveolar/Bronchiolar Carcinoma TGLS = 2-3 ]

Uterus	Hemorrhage Pigmentation	Mild Mild
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Note: HEMORRHAGE TGLs = 3-2

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PRIMARY CAUSE OF DEATH -

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Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 42

TRT#: 5

SEX: Female

DAY ON TEST: 662

DOSE: 5.0%

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Heart  
Mammary Gland  
Salivary Glands  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Nose  
Skin  
Urinary Bladder

Bone  
Gallbladder  
Islets, Pancreatic  
Pancreas  
Stomach - Glandular

Bone Marrow  
Harderian Gland  
Liver  
Parathyroid Gland  
Thyroid Gland

MISSING

Lymph Node - Mandibular

Oviduct

Pituitary Gland

Thymus

AUTO PRECLUDES DIAG.

Intestine Large - Cecum  
Intestine Small - Jejunum

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

OBSERVATIONS

Kidney

Casts  
Cyst  
Glomerulosclerosis  
Inflammation

Mild  
Mild  
Chronic Active, Mild

Note: THICKENING OF MESANGIUM AND BOWMAN'S CAPSULE

Note: CYST TGLs = 6-3,7-3

Lung  
Lymph Node  
Nose

Pleura  
Mesenteric

Inflammation  
Hematopoietic Cell Proliferation

Acute, Moderate  
Moderate

Note: BLOOD IN NASAL CAVITY

Ovary  
Note: ABSCESS TGLs = 1-4,2-4

Bilateral

Abscess

Moderate

Spleen  
Stomach

Forestomach

Hematopoietic Cell Proliferation  
Hyperkeratosis  
Inflammation

Moderate  
Mild  
Chronic Active, Moderate

Note: INFLAMMATION TGLs = 3,4,5-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 42

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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 - Mesenteric	Nose	Ovary	Oviduct
Pancreas	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Lymph Node - Mandibular	Mammary Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Liver		Fatty Change	Focal, Minimal
Ovary			
Note: CYSTIC DEGENERATION OF ONE OVARY			
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Mild
		Inflammation	Chronic Active, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 43	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Spleen	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Liver		Lymphoma Malignant Mixed	
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Note: LYMPH MAL MIXD TGLs = 3-1

Uterus	Endometrium	Hyperplasia	Mild
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[ Hyperplasia TGLS = 2-2 ]

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 43	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 654 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Liver	Lung
Mammary Gland	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

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**MISSING**

Lymph Node - Mandibular	Lymph Node - Mesenteric
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**AUTO PRECLUDES DIAG.**

Gallbladder	Intestine Small - Duodenum
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**OBSERVATIONS**

Pituitary Gland	Pars Distalis	Hyperplasia	Mild
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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 43                      **TRT#:** 7                      **SEX:** Female                      **DAY ON TEST:** 732  
**DOSE:** CONTROL                      **DISP:** Terminal Sacrifice                      **HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Gallbladder	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	Oviduct	Pancreas	Salivary Glands
Skin	Stomach - Glandular	Thymus	Trachea
Urinary Bladder			

**MISSING**

Esophagus	Parathyroid Gland	Thyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
	Cortex	Hypertrophy	Minimal
Lung			
Note: LYMPHOCYTIC CLUSTERS AROUND THE PLEURA			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Minimal
Stomach	Forestomach	Hyperkeratosis	Minimal
Uterus	Endometrium	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 44	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 732 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Kidney	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Liver		Hemangiosarcoma	
		Hemorrhage	Mild
Note: HEMANGIOSARC	TGLs = 5-1		
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus	Endometrium	Hyperplasia	Moderate
Note: HYPERPLASIA	TGLs = 3-3		

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 44

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Salivary Glands	Skin	Spleen	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Parathyroid Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Stomach	Forestomach	Hyperkeratosis	Mild
Uterus	Endometrium	Hyperplasia	Mild

Note: ? STROMAL POLYP ? OR PLANE OF SECTION

Note: HYPERPLASIA TGLs = 1-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 44

TRT#: 7

SEX: Female

DAY ON TEST: 648

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Esophagus
Gallbladder	Heart	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Lymph Node - Mandibular
Nose	Ovary	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder
Uterus			

MISSING

Intestine Large - Cecum	Intestine Large - Rectum	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
	Medulla	Hyperplasia	Mild
Intestine Large	Colon	Lymphoma Malignant Mixed	
Note: DIFFICULT TO IDENTIFY THE SEGMENTS.			
Note: LYMPH MAL MIXD TGLs = 1-6			
Liver		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 2-2,3-2,4-2			
Lung		Lymphoma Malignant Mixed	
Lymph Node	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD TGLs = 5-5			
Skeletal Muscle		Lymphoma Malignant Mixed	
Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Forestomach	Hyperkeratosis	Mild
Thymus		Lymphoma Malignant Mixed	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02  
Test Type: CHRONIC  
Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Test Compound: Pentaerythritol tetranitrate  
CAS Number: 78-11-5

Date Report Requested: 10/16/2014  
Time Report Requested: 19:23:13  
First Dose M/F: NA / NA  
Lab: TSI MASON

<b>ANIMAL ID:</b> 45	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 674 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
<b>NORMAL</b>			
Gallbladder	Islets, Pancreatic	Stomach - Glandular	
<b>OBSERVATIONS</b>			
Liver		Hematopoietic Cell Proliferation	Moderate
Mesentery	Fat	Necrosis	Marked
[ Necrosis TGLS = 3-4 ]			
Pancreas	Acinus	Atrophy	Moderate
	Duct	Dilatation	Moderate
Note: DILATATION	TGLs = 4-2		
Pituitary Gland	Pars Intermed	Adenoma	
Note: ADENOMA	TGLs = 5-3		
Note: MORE LIKE A SARCOMA			
Spleen		Hematopoietic Cell Proliferation	Moderate
Stomach	Forestomach	Acanthosis	Minimal
	Forestomach	Hyperkeratosis	Mild
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 45

TRT#: 5

SEX: Female

DAY ON TEST: 607

DOSE: 5.0%

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Liver  
Nose  
Salivary Glands  
Thyroid Gland

Bone  
Gallbladder  
Intestine Large - Rectum  
Lung  
Oviduct  
Skin  
Trachea

Bone Marrow  
Heart  
Islets, Pancreatic  
Lymph Node - Mandibular  
Pancreas  
Stomach - Glandular  
Urinary Bladder

Brain  
Intestine Large - Cecum  
Kidney  
Mammary Gland  
Parathyroid Gland  
Thymus  
Uterus

MISSING

Pituitary Gland

AUTO PRECLUDES DIAG.

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

OBSERVATIONS

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hyperplasia  
Lymphoma Malignant Mixed

Mild  
Mild

Lymph Node

Mesenteric

Angiectasis  
Hyperplasia

Mild  
Mild

Note: LYMPH MAL MIXD TGLs = 4-6

Ovary

Lymph Follic

Spleen

Note: HYPERPLASIA TGLs = 1-4

Stomach

Forestomach

Hyperkeratosis

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 45

**TRT#:** 7

**SEX:** Female

**DAY ON TEST:** 732

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Heart  
Intestine Small - Duodenum  
Kidney  
Nose  
Salivary Glands  
Thymus

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Ovary  
Skin  
Thyroid Gland

Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Oviduct  
Stomach - Forestomach  
Trachea

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland  
Bone Marrow  
Brain  
Lung

Capsule

Hyperplasia  
Myelofibrosis  
Mineralization  
Congestion  
Hemorrhage  
Inflammation

Mild  
Minimal  
Minimal  
Mild  
Minimal  
Chronic Active, Mild

Pancreas  
Pituitary Gland  
Spleen  
Uterus

Pars Distalis

Adenoma  
Hematopoietic Cell Proliferation  
Hyperplasia

Mild  
Mild

Note: HYPERPLASIA TGLs = 2-4

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 46	<b>TRT#:</b> 4 <b>DOSE:</b> 2.5%	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 728 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Liver	Stomach - Forestomach	Stomach - Glandular
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**OBSERVATIONS**

Mammary Gland	Adenocarcinoma Necrosis	Mild
Note: TGL#2 APPEARS TO BE MAMMARY GLAND AND NOT SKIN		
Note: ADENOCARC TGLs = 2-3		
Spleen	Hematopoietic Cell Proliferation	Mild

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 46

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	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	Oviduct	Pancreas
Pituitary Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 3-9		
Uterus	Endometrium	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 1-4.1		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 46

TRT#: 7

SEX: Female

DAY ON TEST: 716

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Gallbladder  
Islets, Pancreatic  
Salivary Glands  
Trachea

Bone  
Intestine Large - Cecum  
Oviduct  
Skin

Brain  
Intestine Small - Duodenum  
Pancreas  
Stomach - Glandular

Esophagus  
Intestine Small - Ileum  
Parathyroid Gland  
Thyroid Gland

MISSING

Intestine Large - Rectum  
Pituitary Gland

Intestine Small - Jejunum

Mammary Gland

Nose

OBSERVATIONS

Adrenal Gland

Cortex

Lymphoma Malignant Undifferentiated Cell Type

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

Bone Marrow

Lymphoma Malignant Undifferentiated Cell Type

Heart

Lymphoma Malignant Undifferentiated Cell Type

Intestine Large

Colon

Lymphoma Malignant Undifferentiated Cell Type

Kidney

Lymphoma Malignant Undifferentiated Cell Type

Note: LYMPH MAL UNDF TGLs = 7-3

Liver

Fatty Change

Diffuse, Mild

Lymphoma Malignant Undifferentiated Cell Type

Note: LYMPH MAL UNDF TGLs = 5-2

Lung

Hemorrhage

Minimal

Lymphoma Malignant Undifferentiated Cell Type

Note: LYMPH MAL UNDF TGLs = 2-1

Lymph Node

Mandibular

Lymphoma Malignant Undifferentiated Cell Type

Mediastinal

Lymphoma Malignant Undifferentiated Cell Type

Mesenteric

Lymphoma Malignant Undifferentiated Cell Type

Pancreatic

Lymphoma Malignant Undifferentiated Cell Type

Note: ? LYMPHOCYTIC LYMPHOMA ?

Note: LYMPH MAL UNDF TGLs = 1-5,4-5

Note: STARRY-SKIED APPEARANCE IN A FEW NODES.

Ovary

Lymphoma Malignant Undifferentiated Cell Type

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 46	<b>TRT#:</b> 7 <b>DOSE:</b> CONTROL	<b>SEX:</b> Female <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 716 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
Spleen		Hematopoietic Cell Proliferation Lymphoma Malignant Undifferentiated Cell Type	Minimal
Note: LYMPH MAL UNDF TGLs = 3-3			
Stomach	Forestomach	Hyperkeratosis Lymphoma Malignant Undifferentiated Cell Type	Mild
Thymus		Lymphoma Malignant Undifferentiated Cell Type	
Urinary Bladder		Lymphoma Malignant Undifferentiated Cell Type	
Uterus	Endometrium	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 47

TRT#: 4

DOSE: 2.5%

SEX: Female

DISP: Dead

DAY ON TEST: 523

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Stomach - Forestomach  
Trachea

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Liver  
Salivary Glands  
Thymus

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Nose  
Skin  
Thyroid Gland

MISSING

Lymph Node - Mandibular

Mammary Gland

Parathyroid Gland

OBSERVATIONS

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hyperplasia  
Inflammation

Mild  
Mild  
Acute, Mild

Kidney

Note: INCREASED CELLULARITY IN MANY GLOMERULI

Inflammation

Acute, Mild

Lung

Lymph Node

Mesenteric

Hematopoietic Cell Proliferation

Mild

Mesentery

Inflammation

Acute, Moderate

Ovary

Bilateral

Abscess

Marked

Note: ABSCESS TGLs = 2-5.1,3-5.1

Spleen

Hematopoietic Cell Proliferation

Moderate

Note: HEMA CELL PROL TGLs = 4-4

Uterus

Inflammation

Chronic Active, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 47

TRT#: 5

SEX: Female

DAY ON TEST: 731

DOSE: 5.0%

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Mammary Gland	Nose	Oviduct	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Pituitary Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 2-1		
Lymph Node	Mandibular	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
Ovary		Cyst	
		Hemorrhage	Minimal
		Mineralization	Mild
		Pigmentation	Mild
Note: MINERALIZATION	TGLs = 3-4,4-4		
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 47

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Mammary Gland	Nose
Oviduct	Pancreas	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Intestine Small	Ileum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Liver		Lymphoma Malignant Mixed	
Lung		Lymphoma Malignant Mixed	
Lymph Node	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-5,5-5		
Ovary		Cyst	
Note: CYST	TGLs = 3-4		
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Mild
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 4-3		
Thymus		Lymphoma Malignant Mixed	
Uterus	Endometrium	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 48

**TRT#:** 4  
**DOSE:** 2.5%

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 732  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Gallbladder	Ovary	Stomach - Forestomach	Stomach - Glandular
Uterus			

**OBSERVATIONS**

Harderian Gland		Adenoma
Note: ADENOMA	TGLs = 7-4	
Liver		Clear Cell Focus
		Lymphoma Malignant Mixed
Lymph Node	Mesenteric	Lymphoma Malignant Mixed
Note: LYMPH MAL MIXD	TGLs = 6-2	
Spleen		Lymphoma Malignant Mixed

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 48

TRT#: 5

SEX: Female

DAY ON TEST: 586

DOSE: 5.0%

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Gallbladder	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	Oviduct	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Capsule	Hyperplasia	Mild
Skin	Subcut Tiss	Fibrosarcoma	
Note: OF A SMOOTH MUSCLE TUMOR			
Note: FIBROSARC TGLs = 2-11			
Note: IN AREAS THE NEOPLASM HAS THE APPEARANCE			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 3-4			

PRIMARY CAUSE OF DEATH

-

Animal Note: TGL #2 PROBABLY REFERS TO SKIN MASS

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 48

TRT#: 7

SEX: Female

DAY ON TEST: 732

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Skin  
Thyroid Gland

Bone  
Gallbladder  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Stomach - Forestomach  
Trachea

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Kidney  
Oviduct  
Stomach - Glandular  
Urinary Bladder

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pancreas  
Thymus

MISSING

Lymph Node - Mandibular

Parathyroid Gland

Salivary Glands

INSUFFICIENT TISSUE

Uterus

OBSERVATIONS

Adrenal Gland

Capsule  
Cortex

Hyperplasia  
Hyperplasia  
Hepatocellular Adenoma

Mild  
Mild

Liver

Note: HEPATOCLR ADEN TGLs = 3-2

Lung

Note: ALV BRON CARC TGLs = 4-1

Alveolar/Bronchiolar Carcinoma  
Infiltration Cellular

Histiocyte, Minimal

Ovary

Pituitary Gland

Spleen

Pars Distalis

Granulosa Cell Tumor Benign  
Hyperplasia  
Hematopoietic Cell Proliferation

Mild  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 49

TRT#: 4

SEX: Female

DAY ON TEST: 670

DOSE: 2.5%

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lymph Node - Mesenteric  
Stomach - Forestomach  
Trachea

Bone  
Heart  
Kidney  
Ovary  
Stomach - Glandular  
Uterus

Bone Marrow  
Intestine Large - Cecum  
Lung  
Salivary Glands  
Thymus

Brain  
Intestine Large - Colon  
Lymph Node - Mandibular  
Skin  
Thyroid Gland

MISSING

Adrenal Gland - Medulla

Mammary Gland

Nose

Parathyroid Gland

AUTO PRECLUDES DIAG.

Gallbladder  
Islets, Pancreatic

Intestine Small - Duodenum  
Pancreas

Intestine Small - Ileum  
Pituitary Gland

Intestine Small - Jejunum  
Urinary Bladder

OBSERVATIONS

Liver  
  
Note: LYMPH MAL TGLs = 2-2  
Lymph Node  
Note: LYMPH MAL TGLs = 3-9,4-9  
Spleen  
Note: LYMPH MAL TGLs = 1-3

Renal

Fatty Change  
Lymphoma Malignant  
  
Lymphoma Malignant  
  
Lymphoma Malignant

Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 49	<b>TRT#:</b> 5 <b>DOSE:</b> 5.0%	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 663 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Islets, Pancreatic	Kidney	Nose	Ovary
Oviduct	Parathyroid Gland	Pituitary Gland	Salivary Glands
Skin	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Gallbladder	Lymph Node - Mandibular	Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 2-2		
Intestine Small	Jejunum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 1-6		
Liver		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 7-2,8-2.1,9-2.1		
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 6-1		
Lymph Node	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 3-1,11-5		
Note: STARRY-SKIED APPEARANCE IN A FEW NODES			
Pancreas	Acinus	Atrophy	Minimal
Spleen		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 10-3		
Stomach	Forestomach	Hyperkeratosis	Minimal
Uterus	Endometrium	Hyperplasia	Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02

**Test Type:** CHRONIC

**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Pentaerythritol tetranitrate

**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014

**Time Report Requested:** 19:23:13

**First Dose M/F:** NA / NA

**Lab:** TSI MASON

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**ANIMAL ID:** 49

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 663

**DOSE:** 5.0%

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: HYPERPLASIA    TGLs = 5-4

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 49

TRT#: 7

SEX: Female

DAY ON TEST: 689

DOSE: CONTROL

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum
Islets, Pancreatic	Kidney	Lung	Mammary Gland
Nose	Oviduct	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Minimal
	Cortex	Hyperplasia	Minimal
Intestine Small	Ileum, Lymphoid Nodul	Lymphoma Malignant Mixed	
Liver		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 12-2		
Lymph Node	Lumbar	Lymphoma Malignant Mixed	
	Mandibular	Lymphoma Malignant Mixed	
	Mediastinal	Lymphoma Malignant Mixed	
	Mesenteric	Lymphoma Malignant Mixed	
	Pancreatic	Lymphoma Malignant Mixed	
	Renal	Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 2-4.1,3-2,7-5,8-5		
Note: LYMPH MAL MIXD	TGLs = 9-5,10-7,11-7,13-3.1		
Ovary		Cystadenoma	
		Lymphoma Malignant Mixed	
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
		Lymphoma Malignant Mixed	
Note: LYMPH MAL MIXD	TGLs = 5-3,6-3		
Stomach	Forestomach	Hyperkeratosis	Minimal
	Forestomach	Inflammation	Chronic Active, Minimal
Thymus			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 49

**TRT#:** 7  
**DOSE:** CONTROL

**SEX:** Female  
**DISP:** Moribund

**DAY ON TEST:** 689  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: THYMUS PROBABLY INVOLVED IN LYMPHOMA. TISSUE

Note: CANNOT BE IDENTIFIED.

Uterus	Endometrium	Hyperplasia	Minimal
Note: HYPERPLASIA	TGLs = 4-4		

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05023-02  
**Test Type:** CHRONIC  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Pentaerythritol tetranitrate  
**CAS Number:** 78-11-5

**Date Report Requested:** 10/16/2014  
**Time Report Requested:** 19:23:13  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 50

**TRT#:** 4  
**DOSE:** 2.5%

**SEX:** Female  
**DISP:** Terminal Sacrifice

**DAY ON TEST:** 732  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Gallbladder	Liver	Spleen	Stomach - Glandular
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**OBSERVATIONS**

Stomach	Forestomach	Hyperkeratosis	Mild
	Forestomach	Necrosis	Mild

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Note: NECROSIS TGLs = 1-2

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 50

TRT#: 5

SEX: Female

DAY ON TEST: 646

DOSE: 5.0%

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Islets, Pancreatic  
Mammary Gland  
Skin  
Urinary Bladder

Adrenal Gland - Medulla  
Heart  
Kidney  
Nose  
Stomach - Forestomach  
Uterus

Bone  
Intestine Large - Colon  
Liver  
Ovary  
Stomach - Glandular

Bone Marrow  
Intestine Small - Ileum  
Lung  
Oviduct  
Trachea

**MISSING**

Esophagus  
Salivary Glands

Lymph Node - Mandibular  
Thymus

Lymph Node - Mesenteric  
Thyroid Gland

Parathyroid Gland

**AUTO PRECLUDES DIAG.**

Gallbladder  
Intestine Small - Jejunum

Intestine Large - Cecum

Intestine Large - Rectum

Intestine Small - Duodenum

**OBSERVATIONS**

Pancreas  
Pituitary Gland  
Spleen

Pars Distalis

Necrosis  
Hyperplasia  
Hemangiosarcoma  
Hemorrhage  
Necrosis

Mild  
Mild  
Mild  
Marked

Note: NECROSIS TGLs = 1-5

Note: HEMANGIOMATOUS CHANGE IN AREAS

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05023-02

Test Type: CHRONIC

Species/Strain: Mouse/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Pentaerythritol tetranitrate

CAS Number: 78-11-5

Date Report Requested: 10/16/2014

Time Report Requested: 19:23:13

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 50

TRT#: 7

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Gallbladder	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Kidney	Liver
Lung	Mammary Gland	Nose	Ovary
Oviduct	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Lymph Node - Mesenteric	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Capsule	Hyperplasia	Mild
	Cortex	Hyperplasia	Mild
Lymph Node	Mandibular	Hematopoietic Cell Proliferation	Minimal
Spleen		Hematopoietic Cell Proliferation	Minimal
Uterus	Endometrium	Hyperplasia	Mild

Note: HYPERPLASIA TGLs = 1-4

PRIMARY CAUSE OF DEATH

-

\*\* END OF REPORT \*\*

\* PROTOCOL REQUIRED TISSUE