

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

<b>C Number:</b>	C56019
<b>Lock Date:</b>	Not Entered.
<b>Cage Range:</b>	All
<b>Date Range:</b>	All
<b>Reasons For Removal:</b>	All
<b>Removal Date Range:</b>	All
<b>Treatment Groups:</b>	All
<b>Study Gender:</b>	Both
<b>PWG Approval Date</b>	11/02/1990

Experiment Number: 05057-01

Test Type: CHRONIC

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

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First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

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

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**OBSERVATIONS**

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Epididymis		Mesothelioma Malignant	
Note: MESOTHELIO MAL TGLs = 3-6			
Heart		Cardiomyopathy	Mild
Intestine Large	Colon	Parasite	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 4-4			
Liver	Bile Duct	Basophilic Focus	
		Hyperplasia	Mild
Lung			
Note: A PIECE OF INTESTINAL TISSUE EMBEDDED			
Nose		Fungus	Mild
		Inflammation	Acute, Mild
Pancreas	Acinus	Basophilic Focus	
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 5-8			
Spleen		Hematopoietic Cell Proliferation	Mild
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
	Tunic	Mesothelioma Malignant	
Note: MESOTHELIO MAL TGLs = 1-6+6.1			
Note: ADENOMA TGLs = 2-6			

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

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

**Lab:** TSI MASON

---

**ANIMAL ID:** 1

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** UNTREATED 61 UM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Kidney		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 2-4		
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
	Acinus	Hyperplasia	Mild
Prostate	Epithelium	Hyperplasia	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 1-6		

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 732
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Heart	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Lung	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	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	Bilateral, Medulla	Pheochromocytoma Benign	
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Basophilic Focus	
Pituitary Gland	Pars Distalis	Adenoma	
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 1-13		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 5

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 175

**DOSE:** UNTREATED 61 UM

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Liver

Note: SUGGESTION OF NEOPLASTIC NODULE IN SECTION CIRCLED

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 6

TRT#: 1

SEX: Male

DAY ON TEST: 673

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Thrombosis	Minimal
Note: LEUKEMIA MONUC TGLs = 12-3			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-1+2			
Lymph Node	Renal	Pigmentation	Mild
Note: PIGMENT TGLs = 13-4			
Mesentery	Fat	Necrosis	Mild
Note: NECROSIS TGLs = 9-9			
Pancreas	Acinus	Atrophy	Mild
Preputial Gland		Inflammation	Chronic Active, Mild
Note: INFLAMMATION TGLs = 3-10			
Spleen		Hematopoietic Cell Proliferation	Mild
		Leukemia Mononuclear	
[ Hematopoietic Cell Proliferation TGLS = 7-3 ]			
Stomach	Glandular	Necrosis	Mild
Note: NECROSIS TGLs = 14-7			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 6	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 673
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes	Bilateral, Interstit Cell Seminif Tub	Adenoma Atrophy	Mild
Note: ADENOMA	TGLs = 5-6		

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PRIMARY CAUSE OF DEATH	-
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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 7

TRT#: 1

SEX: Male

DAY ON TEST: 637

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Leukemia Mononuclear	
Ear		Inflammation	Acute, Minimal
Eye	Retina	Atrophy	Marked
Heart		Cardiomyopathy	Minimal
Intestine Large	Rectum	Parasite	Mild
Intestine Small	Ileum	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 9-7			
Kidney		Leukemia Mononuclear	
Note: NEPHROPATHY TGLs = 7,8-4		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
Note: LEUKEMIA MONUC TGLs = 6-3		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
	Mediastinal	Leukemia Mononuclear	
Note: THE MEDIASTINAL LYMPH NODE WAS MISTAKENLY THOUGHT TO BE			
Note: THYMUS.			
Note: LEUKEMIA MONUC TGLs = 3-2			
Mammary Gland	Acinus	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Preputial Gland		Inflammation	Chronic Active, Mild

\* PROTOCOL REQUIRED TISSUE

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**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 7	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 637
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-3.1 ]			
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal

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

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 1 <b>DOSE:</b> UNTREATED 61 UM	<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 - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric
Mammary Gland	Nose	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Note: NEPHROPATHY TGLs = 3-4			
Liver		Basophilic Focus	
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
Note: [ EOSIN FOCUS ] TGLs = 4-3			
Pancreas	Acinus	Adenoma	Multiple
	Acinus	Atrophy	Mild
Note: ADENOMA TGLs = 5-9.1			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen			
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 2-6			

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 9

TRT#: 1

SEX: Male

DAY ON TEST: 598

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood	Bone	Bone Marrow	Epididymis
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Nose	Parathyroid Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex Medulla	Leukemia Mononuclear Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver	Bile Duct	Nephropathy Fatty Change Hyperplasia Leukemia Mononuclear Thrombosis	Moderate Focal, Moderate Moderate Moderate
Lung	[ Leukemia Mononuclear TGLS = 5-3 ]	Infiltration Cellular Leukemia Mononuclear Osteosarcoma	Histiocyte, Minimal Metastatic (Uncertain Primary Site)
Note: OSTEOSARC	TGLs = 3-1+2.1		
Lymph Node	Mesenteric Mandibular Mesenteric	Infiltration Cellular Leukemia Mononuclear Leukemia Mononuclear	Histiocyte, Minimal
Pancreas	Acinus	Atrophy Leukemia Mononuclear	Mild
Pituitary Gland	Pars Distalis	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 598
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA	TGLs = 6-8		
Preputial Gland		Inflammation	Chronic Active, Mild
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-3.1 ]			
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
Thymus		Leukemia Mononuclear	

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

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 707

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Bilateral, Medulla	Pheochromocytoma Benign	
Eye	Lens	Cataract	Mild
Note: CATARACT	TGLs = 1-13		
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Degeneration	Cystic, Minimal
		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	[ Degeneration TGLS = 11-3+3.1,12-3+3.1,14-3+3.1 ]		
	[ Fatty Change TGLS = 10-3+3.1,13-3+3.1 ]		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-1+2,5-1+2		
Pancreas	Acinus	Atrophy	Mild
Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 8-3.2 ]		
Stomach	Glandular	Necrosis	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 10

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 707

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: NECROSIS TGLs = 15-7

Testes

Interstit Cell

Adenoma

Seminif Tub

Atrophy

Marked

Note: ADENOMA TGLs = 7-6

Note: ATROPHY TGLs = 6-6

Thymus

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
Note: ANOM HEPAT LOB TGLs = 2-3,3-3			
Mammary Gland		Galactocele	
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 4-8			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 1-6			
Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 12

TRT#: 1

SEX: Male

DAY ON TEST: 724

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Pituitary Gland  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Prostate  
Stomach - Glandular

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

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland  
Kidney  
    Note: NEPHROPATHY   TGLs = 7-4  
Pancreas  
Preputial Gland  
    Note: ADENOMA       TGLs = 2-10  
Skin  
    Note: BASAL CEL CARC   TGLs = 1-13  
Spleen  
Testes  
    Note: ADENOMA       TGLs = 4-6  
Thyroid Gland

Bilateral, Medulla  
  
Acinus  
  
  
Interstit Cell  
Seminif Tub  
  
C Cell

Pheochromocytoma Benign  
Nephropathy  
  
Atrophy  
Adenoma  
  
Basal Cell Carcinoma  
  
Hematopoietic Cell Proliferation  
Adenoma  
Atrophy  
  
Hyperplasia

Mild  
  
Mild  
  
  
Moderate  
  
Mild  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 655

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 5-8	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Fatty Change	Diffuse, Mild
	Bile Duct	Hepatodiaphragmatic Nodule	
		Hyperplasia	Mild
		Leukemia Mononuclear	
		Thrombosis	Mild
Note: ANOM HEPAT LOB TGLs = 8-3 Note: LEUKEMIA MONUC TGLs = 7-3			
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Fibrosis	Mild
Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
Note: FIBROSIS TGLs = 4-3.1 Note: MORE LIKE NEOVASCULARIZATION			
Testes	Bilateral, Interstit Cell Seminif Tub	Adenoma Atrophy	Moderate
Note: ADENOMA TGLs = 2-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 665

DOSE: UNTREATED 61 UM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Islets, Pancreatic	Liver	Lung
Lymph Node - Mesenteric	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Thymus	Trachea	

MISSING

Epididymis	Lymph Node - Mandibular	Preputial Gland	Prostate
Seminal Vesicle	Urinary Bladder		

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Stomach - Glandular	Thyroid Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 1-8			
Testes	Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
Note: ADENOMA TGLs = 2-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 7-8	Bilateral, Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney Note: NEPHROPATHY TGLs = 8-4		Nephropathy	Moderate
Liver		Fatty Change	Focal, Minimal
Nose Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Atrophy	Mild
Parathyroid Gland		Hyperplasia	Mild
Preputial Gland Note: ADENOMA TGLs = 2-10.1	Bilateral	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Moderate
Testes Note: ADENOMA TGLs = 5-6,6-6	Bilateral, Interstit Cell Seminif Tub Interstit Cell	Adenoma Atrophy Hyperplasia	Moderate Mild
Thyroid Gland	C Cell	Adenoma	Multiple

PRIMARY CAUSE OF DEATH

-

Animal Note: PHOSPHORUS METABOLISM.

Animal Note: PLASIA AND NEPHROPATHY SUGGEST ALTERED CALCIUM

Animal Note: THESE CHANGES TOGETHER WITH PARATHYROID HYPER-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 18

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** UNTREATED 61 UM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Animal Note: DYSTROPHIC CALCIFICATION IN KIDNEY, SKIN,AND LUNG

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 4-8		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
Note: ADENOMA	TGLs = 3-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 21

TRT#: 1

SEX: Male

DAY ON TEST: 587

DOSE: UNTREATED 61 UM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Lung	Pancreas
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Skin	Stomach - Forestomach	Stomach - Glandular	Trachea

MISSING

Esophagus	Mammary Gland
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AUTO PRECLUDES DIAG.

Bone Marrow	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Leukemia Mononuclear	
		Necrosis	Moderate
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Nose		Leukemia Mononuclear	
Salivary Glands		Leukemia Mononuclear	
Seminal Vesicle		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 1-3 ]	
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
		Leukemia Mononuclear	
Thymus		Leukemia Mononuclear	
Thyroid Gland		Leukemia Mononuclear	
Urinary Bladder		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 21

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 587

**DOSE:** UNTREATED 61 UM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 689

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Nose
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 11-8		
Bone Marrow		Leukemia Mononuclear	
Brain		Hemorrhage	Mild
		Leukemia Mononuclear	
Note: HEMORRHAGE	TGLs = 15-5		
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Note: NEPHROPATHY	TGLs = 13-4		
Liver		Fatty Change	Focal, Mild
		Leukemia Mononuclear	
[ Fatty Change TGLS = 14-3 ]			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-1+2		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-9,7-8,8-2,12-4		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 22

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 689

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Pancreas	Acinus	Atrophy	Mild
Pituitary Gland		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 9-3.1,10-3.1 ]			
Testes	Bilateral, Interstit Cell Seminif Tub	Adenoma Atrophy	Mild
Note: ADENOMA	TGLs = 6-6		
Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 710

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Kidney		Cyst	
		Nephropathy	Moderate
[ Cyst TGLS = 8-4 ]			
[ Nephropathy TGLS = 9-4 ]			
Liver		Angiectasis	Minimal
		Cyst	
	Bile Duct	Hyperplasia	Mild
Note: CYST TGLs = 13-3			
Note: HYPERPLASIA TGLs = 12-3			
Lung		Fibrosis	Mild
		Inflammation	Acute, Mild
Note: INFLAMMATION TGLs = 3-1+2			
Note: FIBROSIS TGLs = 4-1+2			
Note: MORE LIKE PNEUMONIA			
Mammary Gland		Adenoma	
Note: ADENOMA TGLs = 1-10.1			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 23

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 710

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: ADENOMA TGLs = 14-8

Spleen		Hematopoietic Cell Proliferation	Moderate
Testes	Bilateral, Interstit Cell Seminif Tub	Adenoma Atrophy	Moderate
[ Atrophy TGLS = 6-6,7-6 ]			
Thyroid Gland	C Cell	Hyperplasia	Minimal

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**PRIMARY CAUSE OF DEATH**

-

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Animal Note: LEUKEMOID REACTION IN LIVER AND SPLEEN

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 662

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Note: NEPHROPATHY	TGLs = 7-4		
Liver		Fatty Change	Focal, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 2-9,4-3,6-8		
Pituitary Gland	Pars Distalis	Angiectasis	Mild
Note: ANGIECTASIS	TGLs = 9-8		
Skin		Cyst Epithelial Inclusion	
		Hyperkeratosis	Moderate
Note: HYPERKERATOSIS	TGLs = 10-13		
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-3.1		
Testes	Bilateral, Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 24

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 662

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

Interstit Cell

Hyperplasia

Mild

Note: ADENOMA      TGLs = 3-6

Thymus

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 26	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 610
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Moribund	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Epididymis	Esophagus
Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Nose	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Glandular	Thymus
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Cortex Medulla	Leukemia Mononuclear Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
Intestine Large	Cecum Rectum	Leukemia Mononuclear Parasite	Minimal
Kidney		Thrombosis	Moderate
Liver	Bile Duct	Leukemia Mononuclear Nephropathy Fatty Change Hyperplasia Leukemia Mononuclear	Moderate Focal, Mild Minimal
			[ Hyperplasia TGLS = 5-3 ] [ Leukemia Mononuclear TGLS = 5-3 ]
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric Mandibular Mediastinal	Infiltration Cellular Leukemia Mononuclear Leukemia Mononuclear	Histiocyte, Mild
Mammary Gland	Acinus	Hyperplasia	Mild
Pancreas		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis Pars Distalis	Adenoma Leukemia Mononuclear	
Preputial Gland		Inflammation	Chronic Active, Moderate
Skin		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

**ANIMAL ID:** 26

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 610

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-3 ]			
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Moderate
	Forestomach	Squamous Cell Papilloma	
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 2-6		
Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 27

TRT#: 1

SEX: Male

DAY ON TEST: 725

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-8		
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 7-3		
Liver		Angiectasis	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Angiectasis TGLs = 8-3 ]			
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-9,5-8		
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA	TGLs = 1-13		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 3-3 ]			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

---

**ANIMAL ID:** 27

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 725

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Testes

Bilateral, Interstit Cell

Adenoma

Note: ADENOMA

TGLs = 2-6

Thymus

Leukemia Mononuclear

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Medulla	Pheochromocytoma Malignant	
Note: PHEOCHROM MAL TGLs = 6-8			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 7-4,8-4			
Liver		Eosinophilic Focus	
		Fatty Change	Focal, Mild
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Mixed Cell Focus	
Note: ANOM HEPAT LOB TGLs = 9-3			
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 10-8			
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-3			
Testes	Bilateral, Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

---

**ANIMAL ID:** 29

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** UNTREATED 61 UM

**DISP:** Terminal Sacrifice

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Seminif Tub

Atrophy

Mild

Note: ADENOMA TGLs = 2-6

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 625

DOSE: UNTREATED 61 UM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Prostate	Seminal Vesicle	Thymus
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Minimal
Note: CONGESTION TGLs = 7-3			
Note: ANOM HEPAT LOB TGLs = 8-3			
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
Mammary Gland	Acinus	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
Pharynx	Palate	Squamous Cell Papilloma	
Note: PAPILLOMA SQUA TGLs = 1-13.1			
Pituitary Gland	Pars Distalis	Angiectasis	Mild
Preputial Gland		Inflammation	Chronic Active, Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 637

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Bone

Bone Marrow

Brain

Epididymis

Esophagus

Intestine Large - Cecum

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Islets, Pancreatic

Lymph Node - Mandibular

Prostate

Salivary Glands

Seminal Vesicle

Skin

Spleen

Stomach - Forestomach

Trachea

Urinary Bladder

MISSING

Nose

Parathyroid Gland

Pituitary Gland

Thymus

OBSERVATIONS

Adrenal Gland

Medulla

Pheochromocytoma Benign

Medulla

Pheochromocytoma Malignant

Note: PHEOCHROM MAL TGLs = 6-8.1

Note: PHEOCHROM BGN TGLs = 7-8

Heart

Cardiomyopathy

Mild

Intestine Large

Colon

Diverticulum

Moderate

Colon

Parasite

Mild

Note: MUSCULARIS ON THE OUTER SURFACE.

Note: THE COLONIC DIVERTICULUM WAS LINED BY MUCOSA WITH NO

Note: DIVERTICULUM TGLs = 5-7

Kidney

Nephropathy

Moderate

Liver

Bile Duct

Hyperplasia

Mild

Lung

Infiltration Cellular

Histiocyte, Minimal

Lymph Node

Mesenteric

Infiltration Cellular

Histiocyte, Mild

Mammary Gland

Acinus

Hyperplasia

Mild

Pancreas

Acinus

Atrophy

Mild

Preputial Gland

Inflammation

Chronic Active, Mild

Stomach

Glandular

Mineralization

Minimal

Testes

Bilateral, Interstit Cell

Adenoma

Seminif Tub

Atrophy

Marked

Note: ADENOMA TGLs = 3-6

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

---

**ANIMAL ID:** 33

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 637

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thyroid Gland

C Cell

Adenoma

Note: ADENOMA TGLs = 2-8

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 34

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 658

**DOSE:** UNTREATED 61 UM

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Liver  
Prostate  
Spleen  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Lymph Node - Mandibular  
Salivary Glands  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Pituitary Gland  
Seminal Vesicle  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Islets, Pancreatic  
Preputial Gland  
Skin  
Thyroid Gland

**MISSING**

Intestine Small - Ileum  
Parathyroid Gland

Intestine Small - Jejunum  
Thymus

Lymph Node - Mesenteric

Mammary Gland

**OBSERVATIONS**

Heart  
Kidney  
    Note: NEPHROPATHY    TGLs = 8-4  
Lung  
    Note: MORE LIKE PNEUMONIA  
    [ Inflammation TGLS = 5-1+2 ]  
Nose  
Pancreas  
Testes  
    Note: ADENOMA        TGLs = 6-6,7-6

Acinus  
Bilateral, Interstit Cell  
Interstit Cell

Cardiomyopathy  
Nephropathy  
Inflammation  
Inflammation  
Atrophy  
Adenoma  
Hyperplasia

Mild  
Mild  
Acute, Moderate  
Acute, Moderate  
Minimal  
Mild

PRIMARY CAUSE OF DEATH

-

Animal Note: MASSES 7B AND 13B CONTAIN FAT AND BLOOD VESSELS

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 35

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 288

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**OBSERVATIONS**

Heart		Cardiomyopathy	Minimal
Intestine Large	Colon	Parasite	Minimal
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
Mammary Gland	Acinus	Hyperplasia	Minimal
Nose		Inflammation	Acute, Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Preputial Gland		Inflammation	Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
		Adenoma	
Preputial Gland			
Note: ADENOMA	TGLs = 1-10+10.1		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 2-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
Mammary Gland		Fibroadenoma	
Nose		Fungus	Mild
		Inflammation	Acute, Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 8-8		
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 2-10		
Spleen		Hematopoietic Cell Proliferation	Moderate
	[ Hematopoietic Cell Proliferation TGLS = 5-3 ]		
Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 4-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 721

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
		[ Hyperplasia TGLS = 5-3,6-3,7-3 ]	
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLS = 4-3.1 ]	
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 3-6		
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
		Hepatocellular Adenoma	
	Bile Duct	Hyperplasia	Mild
Note: [ HEPATOCLR ADEN ] TGLs = 6-3			
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Atrophy	Minimal
Prostate	Epithelium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 5-6			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
Note: ADENOMA TGLs = 3-6,4-6			
Thyroid Gland	C Cell	Adenoma	
[ Adenoma TGLS = 1-8 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 619

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland	Salivary Glands	
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
Preputial Gland		Inflammation	Chronic Active, Mild
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC	TGLs = 4-13+13.1		
Testes	Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 5-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 651

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Ear	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Mammary Gland	Nose
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Note: LEUKEMIA MONUC TGLs = 12-8			
Brain		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Degeneration	Cystic, Mild
		Fatty Change	Focal, Mild
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Degeneration TGLS = 13-3 ]			
[ Hyperplasia TGLS = 14-3 ]			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 6-1+2			
Lymph Node	Lumbar	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 43	<b>TRT#:</b> 1	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 651
	<b>DOSE:</b> UNTREATED 61 UM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: LEUKEMIA MONUC	TGLs = 3-9,4-2,11-8,15-15,17-9		
Mesentery		Leukemia Mononuclear	
		Necrosis	Mild
Note: NECROSIS	TGLs = 10-14		
Pancreas		Atrophy	Mild
Pituitary Gland		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 9-3.1 ]		
Testes		Adenoma	
		Seminif Tub	Marked
Note: ATROPHY	TGLs = 8-6		
Note: ADENOMA	TGLs = 7-6		
Thymus		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-2		

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 710

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Ear
Epididymis	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Nose	Parathyroid Gland	Preputial Gland
Prostate	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 11-8.1			
Eye	Lens	Cataract	Mild
		Hemorrhage	Mild
Note: HEMORRHAGE TGLs = 2-14			
Note: CATARACT TGLs = 1-14			
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-2.1			
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 12-4			
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 13-3			
Lung		Fibrosis	Mild
		Leukemia Mononuclear	
[ Fibrosis TGLS = 4-1+2,5-1+2 ]			

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 710

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-9,6-2,10-9,14-8			
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
Salivary Glands		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 9-3.1 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 8-6			
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 713

DOSE: UNTREATED 61 UM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Intestine Large - Colon	Islets, Pancreatic	Liver
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Pancreas
Pituitary Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Skin
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AUTO PRECLUDES DIAG.

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

OBSERVATIONS

Adrenal Gland	Cortex	Carcinoma	
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 7-8.1			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 8-4			
Lung		Carcinoma	Metastatic (Adrenal Gland)
Parathyroid Gland		Hyperplasia	Mild
Spleen			
Note: CONGESTED			
Stomach	Glandular	Mineralization	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 2-6,3-6			

PRIMARY CAUSE OF DEATH

-

Animal Note: DYSTROPHIC MINERALIZATION IN MANY ORGANS

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 51

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 8-8	Medulla	Pheochromocytoma Benign	
Ear [ Squamous Cell Papilloma TGLS = 2-13 ]		Squamous Cell Papilloma	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
Skin	Bile Duct	Hyperplasia	Mild
		Cyst Epithelial Inclusion	
		Hyperkeratosis	Moderate
Spleen		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Mild
Testes Note: ADENOMA TGLs = 4-6,5-6	Bilateral, Interstit Cell Seminif Tub	Adenoma	
		Atrophy	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 52

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Pancreas  
Seminal Vesicle  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Skin  
Thyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Stomach - Forestomach  
Trachea

MISSING

Nose  
Pituitary Gland

OBSERVATIONS

Adrenal Gland  
Heart  
Kidney  
Liver  
Preputial Gland  
[ Adenoma TGLS = 1-10.1,2-10.1 ]  
Spleen  
Testes

Medulla  
Bile Duct  
Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Hyperplasia  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Adenoma  
Hematopoietic Cell Proliferation  
Adenoma  
Atrophy  
Hyperplasia

Mild  
Mild  
Mild  
Mild  
Mild  
Mild  
Minimal

Note: ADENOMA TGLs = 4-6,5-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 53

TRT#: 1

SEX: Male

DAY ON TEST: 666

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Epididymis		Mesothelioma Malignant	
Note: MESOTHELIO MAL	TGLs = 5-6		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN	TGLs = 9-1		
Mesentery		Mesothelioma Malignant	
Note: MESOTHELIO MAL	TGLs = 6-9+14,8-9+14		
Pancreas	Acinus	Atrophy	Mild
Note: MESOTHELIO MAL	TGLs = 7-9	Mesothelioma Malignant	
Skeletal Muscle		Mesothelioma Malignant	
Note: MESOTHELIO MAL	TGLs = 2-13		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
	Tunic	Mesothelioma Malignant	
Note: ADENOMA	TGLs = 4-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 54

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Eye	Retina	Atrophy	Moderate
	Lens	Cataract	Moderate
[ Cataract TGLS = 1-14 ]			
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 55

TRT#: 1

SEX: Male

DAY ON TEST: 485

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Ear	Epididymis
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Nose
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea		

MISSING

Esophagus	Pituitary Gland	Thymus	Urinary Bladder
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OBSERVATIONS

Adrenal Gland	Cortex Medulla	Leukemia Mononuclear Leukemia Mononuclear	
Brain		Hemorrhage Leukemia Mononuclear	Marked
Note: HEMORRHAGE IN THE MEDULLA IS A PLAUSIBLE EXPLANATION			
Note: HEMORRHAGE TGLs = 9-5			
Note: FOR THE HEAD TILT.			
Heart		Leukemia Mononuclear	
Kidney	Renal Tubule	Adenoma Leukemia Mononuclear Nephropathy	Mild
Note: LEUKEMIA MONUC TGLs = 7-4,8-4			
Note: NEPHROPATHY TGLs = 7-4,8-4			
Liver		Fatty Change Leukemia Mononuclear	Diffuse, Moderate
Note: FATTY CHANGE TGLs = 6-3			
Note: LEUKEMIA MONUC TGLs = 6-3			
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular Mediastinal Mesenteric	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 55

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 485

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Mammary Gland	Pancreatic	Leukemia Mononuclear	
Pancreas	Acinus	Hyperplasia	Mild
Preputial Gland	Duct	Hyperplasia	Minimal
Spleen		Inflammation	Chronic Active, Minimal
		Leukemia Mononuclear	

Note: LEUKEMIA MONUC TGLs = 5-3

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 56

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 5-1			
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 1-10+10.1			
Prostate	Epithelium	Hyperplasia	Mild
Spleen		Fibrosis	Moderate
Note: FIBROSIS TGLs = 4-3			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 2-6			
Thyroid Gland	C Cell	Adenoma	
Note: ADENOMA TGLs = 3-8			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 57

TRT#: 1

SEX: Male

DAY ON TEST: 605

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Fatty Change	Diffuse, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-8		
Mammary Gland	Acinus	Hyperplasia	Minimal
Pancreas	Acinus	Atrophy	Minimal
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
Preputial Gland		Inflammation	Chronic Active, Minimal
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-3.1 ]			
Stomach	Forestomach	Acanthosis	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 57

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 605

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes

Interstit Cell

Adenoma

Seminif Tub

Atrophy

Moderate

Interstit Cell

Hyperplasia

Minimal

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 58

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Stomach - Forestomach  
Urinary Bladder

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Heart  
Kidney  
Liver  
  
Pancreas  
Pituitary Gland  
  
Note: ADENOMA      TGLs = 2-8,3-8  
Spleen  
Testes  
Note: ADENOMA      TGLs = 1-6  
Thyroid Gland

Bile Duct  
Acinus  
Pars Distalis  
Pars Distalis  
Pars Distalis  
  
Bilateral, Interstit Cell  
C Cell

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Basophilic Focus  
Adenoma  
Angiectasis  
Hyperplasia  
  
Hematopoietic Cell Proliferation  
Adenoma  
Adenoma

Mild  
Mild  
  
Mild  
Mild  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 59

TRT#: 1

SEX: Male

DAY ON TEST: 694

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-8		
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 7-4		
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Hyperplasia TGLs = 8-3 ]			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-2.1,10-1+2		
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Cyst	
		Leukemia Mononuclear	
Note: CYST	TGLs = 9-8		
Seminal Vesicle		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 5-3 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
Note: ADENOMA	TGLs = 2-6,3-6		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 59

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 694

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thymus

Leukemia Mononuclear

Urinary Bladder

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 61

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Intestine Large	Colon	Parasite	Mild
Kidney		Nephropathy	Minimal
Liver		Fibrosarcoma	Metastatic (Skin)
Note: FIBROSARC	TGLs = 4-3,6-3		
Pancreas	Acinus	Basophilic Focus	
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 5-8		
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC	TGLs = 1-13		
Spleen		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Mild
Note: FIBROSIS	TGLs = 3-3		
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
Note: ADENOMA	TGLs = 2-6		
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 62

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Thymus
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 6-4		
Liver		Basophilic Focus	
		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
		Hyperplasia	Mild
Note: ANOM HEPAT LOB	TGLs = 5-3.1		
Pituitary Gland		Adenoma	
		Angiectasis	Moderate
Note: ADENOMA	TGLs = 7-8		
Preputial Gland		Adenoma	
		Inflammation	Chronic Active, Moderate
Note: INFLAMMATION	TGLs = 2-10		
Note: ADENOMA	TGLs = 1-10		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Interstitial Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstitial Cell	Hyperplasia	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 62

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 732

**DOSE:** UNTREATED 61 UM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA      TGLs = 3-6

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 63

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Small - Ileum	Thymus
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OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Kidney		Cyst	
		Nephropathy	Moderate
Liver		Angiectasis	Minimal
		Basophilic Focus	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: HYPERPLASIA TGLs = 6-3			
Note: LEUKEMIA MONUC TGLs = 5-3			
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-14			
Nose		Squamous Cell Papilloma	
Note: PAPILLOMA SQUA TGLs = 1-13			
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 3-3.1 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
Note: ADENOMA TGLs = 7-6			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 63

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** UNTREATED 61 UM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 64

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Kidney		Nephropathy	Moderate
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Prostate	Epithelium	Hyperplasia	Moderate
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 1-6		
Thymus		Thymoma Benign	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 65

TRT#: 1

SEX: Male

DAY ON TEST: 731

DOSE: UNTREATED 61 UM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Islets, Pancreatic	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
	Medulla	Pheochromocytoma Benign	
[ Hyperplasia TGLS = 4-8 ]			
Kidney		Nephropathy	Moderate
Liver		Angiectasis	Mild
		Basophilic Focus	
		Eosinophilic Focus	
		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
Note: ANGIECTASIS TGLs = 3-3.1			
Note: FATTY CHANGE TGLs = 5-3			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
Note: ADENOMA TGLs = 1-6.1,2-6			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 65

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** UNTREATED 61 UM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 66

TRT#: 1

SEX: Male

DAY ON TEST: 722

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Pituitary Gland	Preputial Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Eye	Lens	Cataract	Mild
Note: CATARACT	TGLs = 1-13		
Heart		Cardiomyopathy	Mild
Intest Large			
Note: INCREASED CELLULARITY IN LAMINA PROPRIA			
Kidney		Cyst	
		Nephropathy	Marked
Note: NEPHROPATHY	TGLs = 13-4+4.1		
Note: CYST	TGLs = 14-4.1		
Liver		Angiectasis	Focal, Moderate
		Basophilic Focus	
		Eosinophilic Focus	
		Leukemia Mononuclear	
Note: BASOPH FOCUS	TGLs = 19-3.1		
Note: ANGIECTASIS	TGLs = 17-3		
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Adenoma	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 66

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 722

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA	TGLs = 11-9		
Skin		Acanthosis	Mild
Note: ACANTHOSIS	TGLs = 2-14		
Spleen		Hematopoietic Cell Proliferation Leukemia Mononuclear	Mild
Testes		Bilateral, Interstit Cell Seminif Tub	Adenoma Atrophy
Note: ADENOMA	TGLs = 10-6		Mild
Thymus		Epithel Cell	Hyperplasia
Thyroid Gland		Follicle	Cyst

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 69

TRT#: 1

SEX: Male

DAY ON TEST: 508

DOSE: UNTREATED 61 UM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

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

**MISSING**

Mammary Gland	Nose	Pituitary Gland	Skin
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Minimal
Note: TUMOR EMBOLI FROM THE PREPUTIAL GLAND CARCINOMA			
Note: WERE NOTED WITHIN THE CARDIAC CHAMBERS.			
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Minimal
Lung		Carcinoma	Metastatic (Preputial Gland)
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Preputial Gland		Carcinoma	
Note: CARCINOMA	TGLs = 1-10+10.1		
Spleen		Hematopoietic Cell Proliferation	Marked
Note: INFARCTED			
Note: HEMA CELL PROL	TGLs = 3-3		
Testes	Bilateral, Interstit Cell	Adenoma	
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 70

TRT#: 1

SEX: Male

DAY ON TEST: 639

DOSE: UNTREATED 61 UG

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 4-8			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Pancreas	Acinus	Atrophy	Minimal
	Acinus	Basophilic Focus	
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 5-8			
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 1-10.1+10.2			
Note: EXTENSIVE NECROSIS AND INFLAMMATION WERE NOTED			
Note: WITHIN AND AROUND THE CARCINOMA.			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 3-3			
Stomach	Glandular	Mineralization	Minimal
Testes	Interstit Cell	Hyperplasia	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 70

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 639

**DOSE:** UNTREATED 61 UM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Urinary Bladder

Calculus Micro Observation Only

Mild

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 73

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Seminal Vesicle  
Thymus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Parathyroid Gland  
Skin  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Preputial Gland  
Stomach - Forestomach  
Urinary Bladder

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

OBSERVATIONS

Adrenal Gland  
Note: PHEOCHROM BGN TGLs = 8-8

Bilateral, Medulla

Pheochromocytoma Benign

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hepatodiaphragmatic Nodule  
Hyperplasia

Mild  
Mild

Note: ANOM HEPAT LOB TGLs = 9-3

Bile Duct

Sarcoma  
Adenoma  
Adenoma  
Sarcoma

Minimal

Lung  
Pancreas  
Pituitary Gland  
Salivary Glands

Mediastinum  
Acinus  
Pars Distalis

Note: SARCOMA TGLs = 2-9.1

Spleen  
Testes

Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Hematopoietic Cell Proliferation  
Adenoma  
Atrophy  
Hyperplasia

Mild  
Mild  
Mild

Note: ADENOMA TGLs = 5-6,6-6

Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 74

TRT#: 2

SEX: Male

DAY ON TEST: 619

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Prostate  
Spleen  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Salivary Glands  
Stomach

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Nose  
Seminal Vesicle  
Thymus

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Parathyroid Gland  
Skin  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Bone  
Note: OSTEOSARC TGLs = 1-13+13.1

Osteosarcoma

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Hyperplasia  
Necrosis

Moderate  
Mild  
Mild  
Minimal  
Metastatic (Bone)

Bile Duct

Lung  
Note: OSTEOSARC TGLs = 3-1+2

Osteosarcoma

Lymph Node  
Pancreas  
Pituitary Gland  
Preputial Gland  
Testes

Mesenteric  
Acinus  
Pars Distalis

Infiltration Cellular  
Atrophy  
Hyperplasia  
Inflammation

Histiocyte, Mild  
Mild  
Mild  
Chronic Active, Mild

Bilateral, Interstit Cell  
Seminif Tub  
C Cell

Adenoma  
Atrophy  
Hyperplasia

Moderate  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 75

TRT#: 2

SEX: Male

DAY ON TEST: 620

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Nose	Pancreas	Parathyroid Gland
Salivary Glands	Seminal Vesicle	Stomach - Glandular	Trachea

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Liver		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	

Note: FOCAL AREA AND WAS SURROUNDED BY HISTIOCYTIC CELLS. IT

Note: THE PIGMENT OBSERVED IN THE LIVER WAS RESTRICTED TO A

Note: FATTY CHANGE TGLs = 9-3

Note: LEUKEMIA MONUC TGLs = 9-3

Note: WAS GOLD YELLOW AND SUGGESTIVE OF BILE.

Lung		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	

Note: LEUKEMIA MONUC TGLs = 5-13

Mammary Gland	Acinus	Hyperplasia	Minimal
Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
	Pars Distalis	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 75

TRT#: 2

SEX: Male

DAY ON TEST: 620

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

[ Leukemia Mononuclear TGLS = 8-8 ]

Preputial Gland

Inflammation

Chronic Active, Marked

Note: INFLAMMATION TGLs = 4-10

Prostate

Epithelium

Hyperplasia

Minimal

Skin

Subcut Tiss

Lipoma

Note: LIPOMA TGLs = 3-13

Spleen

Cyst

Mild

Leukemia Mononuclear

[ Cyst TGLS = 7-3.1 ]

[ Leukemia Mononuclear TGLS = 6-3.1 ]

Stomach

Forestomach

Acanthosis

Minimal

Testes

Interstit Cell

Adenoma

Seminif Tub

Atrophy

Moderate

Interstit Cell

Hyperplasia

Minimal

Thymus

Leukemia Mononuclear

Thyroid Gland

C Cell

Hyperplasia

Minimal

Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 76

TRT#: 2

SEX: Male

DAY ON TEST: 672

DOSE: 0.25% 61LM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Lymph Node			
Note: MORE LIKE LYMPHOCYTOSIS IN MESENTERIC NODE			
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 6-8			
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA TGLs = 2-13			
Spleen		Hematopoietic Cell Proliferation	Moderate
[ Hematopoietic Cell Proliferation TGLS = 4-3 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 76

**TRT#:** 2

**DOSE:** 0.25% 61LM

**SEX:** Male

**DISP:** Dead

**DAY ON TEST:** 672

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 77	<b>TRT#:</b> 2 <b>DOSE:</b> 0.25% 61LM	<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 - Cortex	Bone	Bone Marrow	Brain
Epididymis	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Prostate	Salivary Glands	Seminal Vesicle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Esophagus	Mammary Gland	Parathyroid Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Eye	Note: NECROSIS OF THE EPITHELIUM, PROBABLY LINING THE LID		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
Note: ANOM HEPAT LOB TGLs = 6-3.1			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 2-10.1			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6,4-6			

PRIMARY CAUSE OF DEATH	-
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 80

TRT#: 2

SEX: Male

DAY ON TEST: 718

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 7-8	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Lung Note: LEUKEMIA MONUC TGLs = 2-1+2		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pituitary Gland Note: LEUKEMIA MONUC TGLs = 3-2,6-8	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Spleen Note: ADENOMA TGLs = 8-8		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-3 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 80

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 718

**DOSE:** 0.25% 61LM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Note: ADENOMA TGLs = 4-6

Thymus

Leukemia Mononuclear

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 81

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Lung  
Pancreas  
Seminal Vesicle  
Thymus

Adrenal Gland - Medulla  
Epididymis  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Parathyroid Gland  
Skin  
Thyroid Gland

Bone  
Esophagus  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pituitary Gland  
Stomach - Forestomach  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Stomach - Glandular

**MISSING**

Intestine Large - Colon

Mammary Gland

Prostate

Urinary Bladder

**OBSERVATIONS**

Heart  
Islets, Pancreatic  
Kidney  
Liver  
Preputial Gland  
Note: ADENOMA TGLs = 2-13  
Spleen  
Testes

Bilateral, Interstit Cell

Cardiomyopathy  
Adenoma  
Nephropathy  
Basophilic Focus  
Adenoma  
Hematopoietic Cell Proliferation  
Adenoma

Mild  
  
Mild  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 82

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Liver  
Nose  
Salivary Glands  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Thyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Trachea

MISSING

Mammary Gland

Thymus

OBSERVATIONS

Adrenal Gland  
Heart  
Islets, Pancreatic  
Note: ADENOMA TGLs = 7-9  
Kidney  
Pancreas  
Pituitary Gland  
Note: ADENOMA TGLs = 4-8  
Spleen  
Note: CONGESTED  
Testes  
Note: ADENOMA TGLs = 2-6

Bilateral, Medulla  
  
  
  
Acinus  
Pars Distalis  
  
  
Bilateral, Interstit Cell  
Seminif Tub

Pheochromocytoma Benign  
Cardiomyopathy  
Adenoma  
  
Nephropathy  
Atrophy  
Adenoma  
  
Adenoma  
Atrophy

Mild  
  
  
  
Mild  
Mild  
  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 83

TRT#: 2

SEX: Male

DAY ON TEST: 396

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Preputial Gland  
Skin  
Testes  
Urinary Bladder

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

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

**OBSERVATIONS**

Ear  
Note: SQUAM CEL CARC TGLs = 4-13  
Heart  
Kidney  
Liver  
Pancreas  
Pituitary Gland

Bile Duct  
Acinus  
Pars Distalis

Squamous Cell Carcinoma  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Atrophy  
Hyperplasia

Minimal  
Mild  
Mild  
Minimal  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 85

TRT#: 2

SEX: Male

DAY ON TEST: 626

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Medulla	Leukemia Mononuclear	
Epididymis		Mesothelioma Malignant	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Thrombosis	Marked
[ Leukemia Mononuclear TGLS = 8-3 ]			
Lung		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-9			
Mammary Gland	Acinus	Hyperplasia	Moderate
Mesentery		Leukemia Mononuclear	
Nose		Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Mild
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Leukemia Mononuclear	
Preputial Gland		Inflammation	Chronic Active, Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 85	<b>TRT#:</b> 2	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 626
	<b>DOSE:</b> 0.25% 61LM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 7-3 ]			
Stomach	Forestomach	Leukemia Mononuclear	
	Glandular	Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Marked
	Tunic	Mesothelioma Malignant	
Note: ADENOMA	TGLs = 5-6		
Thymus		Leukemia Mononuclear	
Thyroid Gland	C Cell	Hyperplasia	Minimal

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PRIMARY CAUSE OF DEATH

-

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Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 86

TRT#: 2

SEX: Male

DAY ON TEST: 728

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Note: A FEW SCLEROSSED GLOMERULI			
Liver		Degeneration	Cystic, Mild
		Mixed Cell Focus	
Note: MIXED CL FOCUS TGLs = 5-3			
Note: LARGE CELLS WITH A VACUOLATED CYTOPLASM IN THE FOCUS			
Lung		Infiltration Cellular	Histiocyte, Mild
Pancreas	Acinus	Atrophy	Minimal
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 2-10.1			
Spleen		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Moderate
[ Hematopoietic Cell Proliferation TGLS = 7-3 ]			
Testes	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 87

TRT#: 2

SEX: Male

DAY ON TEST: 481

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Kidney		Nephropathy	Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Mammary Gland	Acinus	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
Note: ATROPHY	TGLs = 5-9		
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 2-10.1		
Testes	Interstit Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 88

TRT#: 2

SEX: Male

DAY ON TEST: 588

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Parathyroid Gland
Skin	Trachea		

OBSERVATIONS

Adrenal Gland	Cortex Medulla	Lymphoma Malignant Undifferentiated Cell Type Lymphoma Malignant Undifferentiated Cell Type	
Bone Marrow		Lymphoma Malignant Undifferentiated Cell Type	
Brain		Lymphoma Malignant Undifferentiated Cell Type	
Esophagus		Lymphoma Malignant Undifferentiated Cell Type	
Heart		Lymphoma Malignant Undifferentiated Cell Type	
Intestine Large	Colon	Lymphoma Malignant Undifferentiated Cell Type	
Intestine Small	Duodenum	Lymphoma Malignant Undifferentiated Cell Type	
Kidney		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 11,12-4+4.1		
Liver		Fatty Change Lymphoma Malignant Undifferentiated Cell Type	Focal, Moderate
Note: LYMPH MAL UNDF	TGLs = 13-3		
Lung		Lymphoma Malignant Undifferentiated Cell Type	
	[ Lymphoma Malignant Undifferentiated Cell Type TGLS = 7-1+2 ]		
Lymph Node	Mandibular Mediastinal Mesenteric	Lymphoma Malignant Undifferentiated Cell Type Lymphoma Malignant Undifferentiated Cell Type Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 10-13		
Note: LYMPH MAL UNDF	TGLs = 4-9		
Note: LYMPH MAL UNDF	TGLs = 6-2.1		
Mammary Gland	Acinus	Hyperplasia	Mild
Mesentery		Lymphoma Malignant Undifferentiated Cell Type	
Nose		Lymphoma Malignant Undifferentiated Cell Type	
Pancreas		Lymphoma Malignant Undifferentiated Cell Type	
Pituitary Gland	Pars Distalis	Lymphoma Malignant Undifferentiated Cell Type	

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 88

TRT#: 2

SEX: Male

DAY ON TEST: 588

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

Preputial Gland	Pars Intermed	Lymphoma Malignant Undifferentiated Cell Type Inflammation	Chronic Active, Mild
Prostate		Lymphoma Malignant Undifferentiated Cell Type	
Salivary Glands		Lymphoma Malignant Undifferentiated Cell Type	
Seminal Vesicle		Lymphoma Malignant Undifferentiated Cell Type	
Spleen		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF TGLs = 8-3			
Stomach	Forestomach Glandular	Lymphoma Malignant Undifferentiated Cell Type Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF TGLs = 14-7			
Testes	Interstit Cell	Hyperplasia	Minimal
Thymus		Lymphoma Malignant Undifferentiated Cell Type	
Thyroid Gland	C Cell	Adenoma Lymphoma Malignant Undifferentiated Cell Type	
Note: ADENOMA TGLs = 5-8			
Urinary Bladder		Lymphoma Malignant Undifferentiated Cell Type	
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 89

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Large - Colon	Mammary Gland
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: EARLY LEUKEMIA			
Pancreas	Acinus	Atrophy	Mild
Spleen		Leukemia Mononuclear	
Note: CONGESTED. PROBABLY EARLY LEUKEMIA			
Note: LEUKEMIA MONUC TGLs = 5-3			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6,9-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 90

TRT#: 2

SEX: Male

DAY ON TEST: 626

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Adrenal Gland - Medulla	Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland Note: LEUKEMIA MONUC TGLs = 8-8	Cortex	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Brain Note: HEMORRHAGE TGLs = 11-5		Hemorrhage	Mild
		Leukemia Mononuclear	
Heart		Cardiomyopathy	Minimal
Intestine Large	Cecum	Leukemia Mononuclear	
Kidney Note: LEUKEMIA MONUC TGLs = 9-4 Note: NEPHROPATHY TGLs = 9-4		Leukemia Mononuclear	
		Nephropathy	Mild
Liver Note: LEUKEMIA MONUC TGLs = 10-3	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node Note: LEUKEMIA MONUC TGLs = 7-8 Note: LEUKEMIA MONUC TGLs = 5-1 Note: LEUKEMIA MONUC TGLs = 4-9	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Nose		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 90

TRT#: 2

SEX: Male

DAY ON TEST: 626

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

Pancreas		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
	Pars Distalis	Leukemia Mononuclear	
Preputial Gland		Adenoma	
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-13		
Note: ADENOMA	TGLs = 3-13		
Prostate		Leukemia Mononuclear	
Salivary Glands		Leukemia Mononuclear	
Seminal Vesicle		Leukemia Mononuclear	
Skeletal Muscle		Leukemia Mononuclear	
Skin		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-3		
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Leukemia Mononuclear	
	Glandular	Leukemia Mononuclear	
	Forestomach	Necrosis	Mild
Note: LEUKEMIA MONUC	TGLs = 12-7		
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
		Leukemia Mononuclear	
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 92

TRT#: 2

SEX: Male

DAY ON TEST: 658

DOSE: 0.25% 61LM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Pancreas  
Seminal Vesicle  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Skin  
Thyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Stomach - Forestomach  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland

Medulla  
Medulla

Hyperplasia  
Pheochromocytoma Benign

Mild

Heart

Cardiomyopathy

Moderate

Kidney

Nephropathy

Mild

Liver

Necrosis

Mild

Pituitary Gland

Pars Distalis  
Pars Distalis  
Pars Distalis

Adenoma  
Angiectasis  
Hyperplasia

Mild

Mild

Note: ADENOMA TGLs = 5-8

Note: ACIDOPHILS PREPONDERANT IN HYPERPLASTIC AREA

Preputial Gland

Adenoma

Note: ADENOMA TGLs = 2-13

Spleen

Hematopoietic Cell Proliferation

Moderate

Note: HEMA CELL PROL TGLs = 4-3

Testes

Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Adenoma  
Atrophy  
Hyperplasia

Mild

Minimal

[ Atrophy TGLS = 3-6 ]

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 92

**TRT#:** 2

**DOSE:** 0.25% 61LM

**SEX:** Male

**DISP:** Dead

**DAY ON TEST:** 658

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 93

TRT#: 2

SEX: Male

DAY ON TEST: 646

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Note: LEUKEMIA MONUC TGLs = 6-4			
Liver		Fatty Change	Focal, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-3			
Lung		Leukemia Mononuclear	
		Metaplasia	Osseous, Minimal
Note: METAPLASIA OR BONY SPICULE			
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Mild
Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[ Fibrosis TGLS = 5-3+3.1 ]			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 93	<b>TRT#:</b> 2	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 646
	<b>DOSE:</b> 0.25% 61LM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 3-6		
Thymus		Leukemia Mononuclear	

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PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 94	<b>TRT#:</b> 2 <b>DOSE:</b> 0.25% 61LM	<b>SEX:</b> Male <b>DISP:</b> Dead	<b>DAY ON TEST:</b> 623 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Pituitary Gland	Prostate	Skin	Trachea

**MISSING**

Parathyroid Gland			
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**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Pancreas
Urinary Bladder			

**OBSERVATIONS**

Adrenal Gland	Cortex Medulla	Leukemia Mononuclear Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Leukemia Mononuclear	
Liver		Nephropathy	Mild
		Fatty Change	Focal, Moderate
		Leukemia Mononuclear	
Note: FATTY CHANGE TGLs = 5-3			
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular Mediastinal Mesenteric Pancreatic	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 10-14			
Note: LEUKEMIA MONUC TGLs = 8-13			
Mammary Gland	Acinus	Hyperplasia	Moderate
Nose		Leukemia Mononuclear	
Preputial Gland		Leukemia Mononuclear	
Salivary Glands		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 94	<b>TRT#:</b> 2	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 623
	<b>DOSE:</b> 0.25% 61LM	<b>DISP:</b> Dead	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Seminal Vesicle		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 9-6		
Skeletal Muscle		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-3		
Stomach	Forestomach	Leukemia Mononuclear	
	Glandular	Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Marked
Note: ADENOMA	TGLs = 3-6		
Thymus		Leukemia Mononuclear	
Thyroid Gland		Leukemia Mononuclear	

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 95

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: A FEW SCLEROSSED GLOMERULI			
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
		Necrosis	Moderate
Note: NECROSIS	TGLs = 4-3.1		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 3-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 96

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Eye Note: CATARACT TGLs = 2-13	Lens	Cataract	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Lung		Infiltration Cellular	Histiocyte, Minimal
Nose Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Testes Note: ADENOMA TGLs = 4-6	Bilateral, Interstit Cell	Adenoma	
Thyroid Gland Note: HYPERPLASIA TGLs = 3-8	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 97

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Hyperplasia	Mild
Kidney		Nephropathy	Mild
Liver		Degeneration	Cystic, Minimal
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Leukemia Mononuclear	
Lung			
Note: LEUKEMIA MONUC	TGLs = 7-1+2		
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Cyst	
	Pars Distalis	Hyperplasia	Mild
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 3-10		
Skin	Subcut Tiss	Fibroma	
		Hyperkeratosis	Moderate
		Keratoacanthoma	
Note: FIBROMA	TGLs = 4-14		
Note: KERATOACANTHMA	TGLs = 2-13		
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 97

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 730

**DOSE:** 0.25% 61LM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 5-6			
Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 99

TRT#: 2

SEX: Male

DAY ON TEST: 728

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Nephropathy	Moderate
Liver		Fatty Change	Focal, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Fatty Change TGLS = 11-3 ]			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-1+2			
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-2,9-9			
Pancreas	Acinus	Atrophy	Mild
Skin	Subcut Tiss	Fibroma	
		Hyperkeratosis	Moderate
		Squamous Cell Papilloma	
Note: HYPERKERATOSIS TGLs = 2-13			
Note: FIBROMA TGLs = 3-14			
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 99

TRT#: 2

SEX: Male

DAY ON TEST: 728

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

[ Leukemia Mononuclear TGLS = 8-3 ]

Stomach	Forestomach	Hyperkeratosis	Mild
	Glandular	Necrosis	Moderate
Note: HYPERKERATOSIS	TGLs = 12-7+7.1		
Note: NECROSIS	TGLs = 13-7.1		
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 6-6,7-6		
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 100

TRT#: 2

SEX: Male

DAY ON TEST: 668

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Liver  
Mesentery  
Salivary Glands  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Seminal Vesicle  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Skin  
Thymus

MISSING

Islets, Pancreatic

Mammary Gland

Pancreas

OBSERVATIONS

Heart

Cardiomyopathy

Mild

Kidney

Nephropathy

Moderate

Pituitary Gland

Pars Distalis

Adenoma

Pars Distalis

Angiectasis

Moderate

Note: ADENOMA TGLs = 6-8

Preputial Gland

Adenoma

[ Adenoma TGLS = 2-13 ]

Testes

Interstit Cell

Hyperplasia

Mild

Thyroid Gland

C Cell

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 101

TRT#: 2

DOSE: 0.25% 61LM

SEX: Male

DISP: Moribund

DAY ON TEST: 653

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mesenteric	Nose
Preputial 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	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-8		
Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 10-1+2		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-9		
Note: LEUKEMIA MONUC	TGLs = 4-15		
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 101

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 653

**DOSE:** 0.25% 61LM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: ADENOMA TGLs = 9-8

Spleen

Leukemia Mononuclear

[ Leukemia Mononuclear TGLS = 5-3+3.1+3.2 ]

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 103

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pituitary Gland  
Seminal Vesicle  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Preputial Gland  
Skin  
Thymus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Pancreas  
Prostate  
Spleen  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Salivary Glands  
Stomach - Forestomach  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Heart  
Kidney  
Liver  
Spleen  
Note: CONGESTED  
Testes

Cardiomyopathy  
Nephropathy  
Basophilic Focus

Mild  
Moderate

Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Adenoma  
Atrophy  
Hyperplasia

Mild  
Mild

Note: ADENOMA TGLs = 2-6,3-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 104

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 10-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-1+2		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-2,9-8		
Nose		Inflammation	Acute, Mild
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA	TGLs = 11-8		
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 3-13		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 104

**TRT#:** 2  
**DOSE:** 0.25% 61LM

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

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

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen  
Note: LEUKEMIA MONUC TGLs = 8-3

Leukemia Mononuclear

Testes  
Bilateral, Interstit Cell  
Seminif Tub

Adenoma  
Atrophy

Mild

Note: ADENOMA TGLs = 6-6  
Thymus

Leukemia Mononuclear

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 106

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 4-4			
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Mammary Gland		Fibroadenoma	
		Galactocele	
[ Galactocele TGLs = 2-13 ]			
Pancreas	Acinus	Adenoma	Multiple
Pituitary Gland	Pars Distalis	Adenoma	Multiple
Note: ADENOMA TGLs = 5-8			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
Note: ADENOMA TGLs = 3-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 108

TRT#: 2

SEX: Male

DAY ON TEST: 467

DOSE: 0.25% 61LM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Islets, Pancreatic	Mesentery
Parathyroid Gland	Prostate	Seminal Vesicle	Skin
Stomach - Forestomach	Trachea	Urinary Bladder	

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Stomach - Glandular	Thyroid Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Brain		Hemorrhage	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 11-5		
Note: HEMORRHAGE	TGLs = 11-5		
Epididymis		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Note: LEUKEMIA MONUC	TGLs = 9-4		
Liver	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 10-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-8		
Mammary Gland	Acinus	Hyperplasia	Mild
Nose		Leukemia Mononuclear	
Pancreas		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-9		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

**ANIMAL ID:** 108

**TRT#:** 2

**DOSE:** 0.25% 61LM

**SEX:** Male

**DISP:** Dead

**DAY ON TEST:** 467

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
Preputial Gland		Inflammation	Chronic Active, Mild
Salivary Glands		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-3		
Testes	Bilateral, Interstit Cell Interstit Cell	Adenoma Hyperplasia	Minimal
Thymus		Leukemia Mononuclear Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 109

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Angiectasis	Mild
		Basophilic Focus	
		Fatty Change	Focal, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Mixed Cell Focus	
Lung		Leukemia Mononuclear	
Preputial Gland		Adenoma	
Note: ADENOMA	TGLs = 2-10		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-3.1 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 5-6		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 109

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 730

**DOSE:** 0.25% 61LM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Thyroid GI

Note: A FEW LARGE FOLLICLES

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 112

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 6-8			
Harderian Gland		Adenoma	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
Note: ANOM HEPAT LOB TGLs = 4-3.1			
Pancreas	Acinus	Atrophy	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6			
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 113

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 470

**DOSE:** 0.25% 61LM

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Skin

Note: THIS MALIGNANT AND METASTATIC TUMOR HAD BOTH A SQUAMOUS

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 115

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 8-8	Bilateral, Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Moderate
Kidney Note: NEPHROPATHY TGLs = 9-4		Nephropathy	Moderate
Liver  Note: [ MIXED CL FOCUS ] TGLs = 10-3 Note: SECTION MARKED BY INK.		Basophilic Focus Eosinophilic Focus Fatty Change Hyperplasia Leukemia Mononuclear Mixed Cell Focus	Focal, Mild Mild
Lung	Alveolar Epith	Hyperplasia Leukemia Mononuclear	Mild
Lymph Node  Note: LEUKEMIA MONUC TGLs = 3-2,7-8	Mediastinal Mesenteric	Leukemia Mononuclear Leukemia Mononuclear	
Pancreas Note: ADENOMA TGLs = 11-9	Acinus	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 115	<b>TRT#:</b> 2	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 0.25% 61LM	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-3 ]			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 5-6		
Thymus		Leukemia Mononuclear	
Thyroid Gland	Follicular Cel	Hyperplasia	Mild

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 117

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
		Thrombosis	Mild
Islets, Pancreatic		Hyperplasia	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-8		
Pancreas	Acinus	Atrophy	Mild
	Acinus	Basophilic Focus	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-3		
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 2-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 117

**TRT#:** 2

**DOSE:** 0.25% 61LM

**SEX:** Male

**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 118

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Large - Colon	Intestine Small - Jejunum	Mammary Gland
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OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 5-8	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-3,8-3			
Note: [ HYPERPLASIA ] TGLs = 7-3			
Lung Note: LEUKEMIA MONUC TGLs = 6-1+2		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
Pancreas	Acinus	Hyperplasia	Minimal
Pituitary Gland Note: BE CONSIDERED Note: POSSIBILITY OF INTERMEDIATE LOBE TUMOR TO	Pars Distalis	Adenoma	
Spleen  Note: LEUKEMIA MONUC TGLs = 3-3+3.1 Note: SARCOMA TGLs = 4-3.1		Leukemia Mononuclear Sarcoma	
Testes	Bilateral, Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:44  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 118	<b>TRT#:</b> 2 <b>DOSE:</b> 0.25% 61LM	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 730 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
Thyroid Gland	Interstit Cell C Cell	Hyperplasia Hyperplasia	Mild Minimal
<b>PRIMARY CAUSE OF DEATH</b>	-		

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 119

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Salivary Glands  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Pituitary Gland  
Skin  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Prostate  
Spleen  
Thyroid Gland

MISSING

Mammary Gland

OBSERVATIONS

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Clear Cell Focus  
Hyperplasia  
Pigmentation

Mild  
Mild  
  
  
Mild  
Mild

Lymph Node  
Note: PIGMENT TGLs = 9-13,10-13

Bile Duct  
Renal

Inflammation  
Adenoma  
Adenoma

Acute, Moderate

Nose  
Pancreas  
Preputial Gland  
Note: ADENOMA TGLs = 2-10

Acinus

Testes  
Note: ADENOMA TGLs = 5-6,7-6

Bilateral, Interstit Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 120

TRT#: 2

SEX: Male

DAY ON TEST: 723

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Islets, Pancreatic		Adenoma	
		Hyperplasia	Mild
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 8-3 ]			
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-9,4-2,9-8.1,11-9.1		
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 10-8		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 7-3+3.1 ]			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:44

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

**Lab:** TSI MASON

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**ANIMAL ID:** 120

**TRT#:** 2

**DOSE:** 0.25% 61LM

**SEX:** Male

**DISP:** Moribund

**DAY ON TEST:** 723

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes

Bilateral, Interstit Cell  
Seminif Tub

Adenoma

Atrophy

Mild

Note: ADENOMA TGLs = 6-6

Thymus

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 121

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Intestine Large	Colon	Polyp Adenomatous	
Note: POLYP ADENOMAT TGLs = 3-7.1			
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 2-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 122

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Bone Marrow

Brain

Epididymis

Esophagus

Intestine Large - Cecum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Islets, Pancreatic

Lung

Lymph Node - Mandibular

Lymph Node - Mesenteric

Parathyroid Gland

Pituitary Gland

Preputial Gland

Prostate

Salivary Glands

Seminal Vesicle

Skin

Stomach - Forestomach

Thymus

Trachea

Urinary Bladder

**MISSING**

Intestine Large - Colon

Intestine Large - Rectum

Mammary Gland

**OBSERVATIONS**

Heart

Cardiomyopathy

Mild

Kidney

Nephropathy

Mild

Liver

Basophilic Focus

Bile Duct

Hyperplasia

Mild

Nose

Inflammation

Acute, Mild

Pancreas

Acinus

Atrophy

Mild

Spleen

Hematopoietic Cell Proliferation

Mild

Stomach

Glandular

Hyperplasia

Minimal

Note: HYPERPLASIA TGLs = 3-7.1

Testes

Bilateral, Interstit Cell

Adenoma

Seminif Tub

Atrophy

Mild

Interstit Cell

Hyperplasia

Minimal

Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 123

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Note: NEPHROPATHY TGLs = 7-4			
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: ANOM HEPAT LOB TGLs = 8-3.1			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 6-1+2			
Pancreas	Acinus	Atrophy	Mild
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 2-13,3-13			
Spleen		Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 4-6,5-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 126

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Eye	Lens	Cataract	Mild
[ Cataract TGLS = 3-14 ]			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Note: EOSINOPHILIC GLOBULES IN TUBULAR CELLS			
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	Multiple
Skin	Subcut Tiss	Fibroma	
[ Fibroma TGLS = 4-13 ]			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 6-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 127

TRT#: 2

SEX: Male

DAY ON TEST: 730

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 5-8.1	Medulla	Pheochromocytoma Benign	
Eye Note: CATARACT TGLs = 2-13	Lens	Cataract	Mild
Heart		Cardiomyopathy	Mild
Kidney Note: NEPHROPATHY TGLs = 6-4		Nephropathy	Moderate
Liver		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Lung	Alveolar Epith	Hyperplasia	Mild
		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Testes Note: ADENOMA TGLs = 4-6	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:44

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 128

TRT#: 2

SEX: Male

DAY ON TEST: 723

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Islets, Pancreatic	Nose	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Intestine Small	Ileum	Leukemia Mononuclear	
	Jejunum	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 12-3 ]			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 8-1+2			
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 4-9,5-2,6-8.1			
Pancreas	Acinus	Atrophy	Mild
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01  
Test Type: CHRONIC  
Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4  
CAS Number: 59820-43-8

Date Report Requested: 10/19/2014  
Time Report Requested: 21:01:44  
First Dose M/F: NA / NA  
Lab: TSI MASON

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<b>ANIMAL ID:</b> 128	<b>TRT#:</b> 2	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 723
	<b>DOSE:</b> 0.25% 61LM	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen		Leukemia Mononuclear	
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 11-3.1+3.2 ]			
Stomach	Glandular	Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 7-6		
Thymus		Leukemia Mononuclear	

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PRIMARY CAUSE OF DEATH

-

Animal Note: LEUKEMIA RATHER THAN MONONUCLEAR LEUKEMIA

Animal Note: MORE LIKE UNDIFFERENTIATED OR LYMPHOCYTIC

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 129

TRT#: 2

SEX: Male

DAY ON TEST: 731

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Cyst	
Note: CYST TGLs = 3-4		Nephropathy	Moderate
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: [ ADENOMA ] TGLs = 4-8			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
Note: ADENOMA TGLs = 2-6			

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 132

TRT#: 2

SEX: Male

DAY ON TEST: 731

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Esophagus	Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 4-4		
Liver		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 2-6		
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 133

TRT#: 2

SEX: Male

DAY ON TEST: 731

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Eye	Lens	Cataract	Moderate
Note: CATARACT	TGLs = 2-15		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
Lung	Alveolar Epith	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 5-2.1		
Mammary Gland		Galactocele	
Note: GALACTOCELE	TGLs = 3-13		
Pancreas	Acinus	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA	TGLs = 7-8		
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA	TGLs = 4-15		
Stomach	Forestomach	Necrosis	Moderate
Note: NECROSIS	TGLs = 6-7.1		
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 134

TRT#: 2

SEX: Male

DAY ON TEST: 731

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Heart		Thrombosis	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Adenoma	
Preputial Gland			
Note: ADENOMA	TGLs = 2-13		
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 4-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 136

TRT#: 2

SEX: Male

DAY ON TEST: 673

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 5-4		
Liver	Bile Duct	Hyperplasia	Mild
Nose		Fungus	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ANGIECTASIS	TGLs = 6-8.1		
Note: ADENOMA	TGLs = 7-8.1		
Testes	Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
Note: ATROPHY	TGLs = 4-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 137

TRT#: 2

SEX: Male

DAY ON TEST: 731

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Thymus

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Malignant	
Note: THE POSSIBILITY OF A CORTICAL CARCINOMA			
Note: HAS TO BE CONSIDERED			
[ Pheochromocytoma Malignant TGLS = 2-8.1+8.2 ]			
Kidney		Cyst	
		Nephropathy	Moderate
Note: NEST OF TUMOR CELLS IN A BLOOD VESSEL			
Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
Note: CONSIDERED IN THE SECTION CIRCLED			
Note: POSSIBILITY OF A NEOPLASTIC NODULE HAS TO BE			
Lung	Alveolar Epith	Hyperplasia	Mild
		Pheochromocytoma Malignant	Metastatic (Adrenal Gland)
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

Animal Note: TISSUE NOS, TGL #3 IS LIVER

Animal Note: PANCREATIC NODULE, TGL #4 PROBABLY REFERS TO

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 137

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 0.25% 61LM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Animal Note: TO PANCREATIC LYMPH NODE

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 138

TRT#: 2

DOSE: 0.25% 61LM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Stomach - Forestomach

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-9,6-8		
Nose		Inflammation	Acute, Mild
Pancreas	Acinus	Atrophy	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-9		
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Seminal Vesicle		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 138	<b>TRT#:</b> 2	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 731
	<b>DOSE:</b> 0.25% 61LM	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen		Hematopoietic Cell Proliferation	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 2-3		
Testes	Bilateral, Interstit Cell	Adenoma	
Thymus		Leukemia Mononuclear	
Urinary Bladder		Leukemia Mononuclear	

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**PRIMARY CAUSE OF DEATH** -

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Animal Note: MORE LIKE LYMPHOCYTIC LEUKEMIA

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 139

TRT#: 2

SEX: Male

DAY ON TEST: 731

DOSE: 0.25% 61LM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Islets, Pancreatic

OBSERVATIONS

Adrenal Gland	Medulla Bilateral, Medulla	Hyperplasia Pheochromocytoma Benign	Mild
Heart		Cardiomyopathy	Mild
Kidney		Leukemia Mononuclear Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 5-4			
Liver		Basophilic Focus Fatty Change	Focal, Minimal
	Bile Duct	Hyperplasia	Mild
Lung		Leukemia Mononuclear Alveolar/Bronchiolar Adenoma Infiltration Cellular Leukemia Mononuclear	Histiocyte, Mild
Note: LEUKEMIA MONUC TGLs = 3-1+2			
Lymph Node	Mediastinal Mesenteric Pancreatic	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 6-9			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 139

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 731

**DOSE:** 0.25% 61LM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Note: LEUKEMIA MONUC TGLs = 4-3

Testes

Bilateral, Interstit Cell

Adenoma

Seminif Tub

Atrophy

Mild

Interstit Cell

Hyperplasia

Mild

Note: ADENOMA TGLs = 2-6

Thyroid Gland

C Cell

Adenoma

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 140

TRT#: 2

DOSE: 0.25% 61LM

SEX: Male

DISP: Moribund

DAY ON TEST: 367

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Islets, Pancreatic	Lymph Node - Mandibular	Nose
Parathyroid Gland	Prostate	Salivary Glands	Skin
Stomach - Glandular	Testes	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Mammary Gland	Pituitary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Cortex	Lymphoma Malignant Undifferentiated Cell Type	
	Medulla	Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 19-8		
Heart		Cardiomyopathy	Minimal
Intestine Small	Ileum	Lymphoma Malignant Undifferentiated Cell Type	
	Jejunum	Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 11-7,7.1		
Note: LYMPH MAL UNDF	TGLs = 12-7		
Kidney		Lymphoma Malignant Undifferentiated Cell Type	
		Nephropathy	Mild
Liver		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 23-3,24-3,25-3		
Lung		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 6-1,2		
Lymph Node	Axillary	Lymphoma Malignant Undifferentiated Cell Type	
	Lumbar	Lymphoma Malignant Undifferentiated Cell Type	
	Mediastinal	Lymphoma Malignant Undifferentiated Cell Type	
	Mesenteric	Lymphoma Malignant Undifferentiated Cell Type	
	Renal	Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 3-7.1		
Note: LYMPH MAL UNDF	TGLs = 15-7		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 140

TRT#: 2

SEX: Male

DAY ON TEST: 367

DOSE: 0.25% 61LM

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: LYMPH MAL UNDF TGLs = 22-10

Note: LYMPH MAL UNDF TGLs = 7-2

[ Lymphoma Malignant Undifferentiated Cell Type TGLS = 16-9 ]

Pancreas	Acinus	Atrophy	Mild
Preputial Gland		Inflammation	Chronic Active, Marked
Seminal Vesicle		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 10-6		
Spleen		Lymphoma Malignant Undifferentiated Cell Type	
Note: LYMPH MAL UNDF	TGLs = 17-3,18-3		
Stomach	Forestomach	Necrosis	Marked
	Forestomach	Squamous Cell Papilloma	
Note: PAPILLOMA SQUA	TGLs = 26-7		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 141

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mesenteric	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Intestine Small	Jejunum	Sarcoma	
Note: SARCOMA	TGLs = 4-7.1+7.2+7.3		
Kidney		Nephropathy	Mild
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 2-6,3-6		
Note: ATROPHY	TGLs = 2-6		
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 143

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver		Angiectasis	Minimal
		Basophilic Focus	
		Clear Cell Focus	
Note: CLEAR CL FOCUS TGLs = 4-3			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA TGLs = 5-8			
Spleen		Hematopoietic Cell Proliferation	Mild
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 144

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Seminal Vesicle  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Thyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Salivary Glands  
Stomach - Forestomach  
Trachea

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland  
Heart  
Kidney  
Liver

Medulla

Pheochromocytoma Benign  
Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Clear Cell Focus  
Hyperplasia

Mild  
Moderate

Note: CLEAR CL FOCUS TGLs = 5-3

Bile Duct

Alveolar/Bronchiolar Adenoma

Mild

Lung  
Pancreas  
Pituitary Gland

Acinus  
Pars Distalis  
Pars Distalis

Hyperplasia  
Adenoma  
Hyperplasia

Mild  
Mild

Testes

Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Adenoma  
Atrophy  
Hyperplasia

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 145

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mesenteric

OBSERVATIONS

Epididymis		Granuloma Sperm	Moderate
Note: GRANLOMA SPERM TGLs = 3-6.1			
Heart		Cardiomyopathy	Mild
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Liver		Angiectasis	Focal, Moderate
		Basophilic Focus	
		Degeneration	Cystic, Minimal
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Degeneration TGLS = 7-3 ]			
Lung		Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-3 ]			
Stomach			
Note: TGL#8 PROBABLY REFERS TO LYMPHOID TISSUE			
Testes	Bilateral, Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 145

**TRT#:** 3

**DOSE:** 0.5% 61HM

**SEX:** Male

**DISP:** Terminal Sacrifice

**DAY ON TEST:** 729

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Seminif Tub

Atrophy

Moderate

Interstit Cell

Hyperplasia

Mild

Note: ADENOMA TGLs = 4-6

Thyroid Gland

C Cell

Adenoma

Tongue

Squamous Cell Papilloma

Note: PAPILLOMA SQUA TGLs = 2-7

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 146

TRT#: 3

SEX: Male

DAY ON TEST: 668

DOSE: 0.5% 61HM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Intestine Large - Colon
Intestine Small - Duodenum	Islets, Pancreatic	Lung	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Preputial Gland
Prostate	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Mammary Gland
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AUTO PRECLUDES DIAG.

Bone Marrow	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Ileum
Intestine Small - Jejunum	Salivary Glands	Thyroid Gland	

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 6-8			
Brain		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Leukemia Mononuclear	
		Necrosis	Mild
[ Necrosis TGLS = 7-3 ]			
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-8.1			
Skin		Cyst Epithelial Inclusion	
		Hyperkeratosis	Marked
Note: HYPERKERATOSIS TGLs = 2-10			
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 4-3 ]			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 146

**TRT#:** 3

**DOSE:** 0.5% 61HM

**SEX:** Male

**DISP:** Dead

**DAY ON TEST:** 668

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes

Bilateral, Interstit Cell  
Seminif Tub

Adenoma

Atrophy

Mild

Note: ADENOMA TGLs = 3-6

Thymus

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

Animal Note: MORE LIKE LYMPHOCYTIC LEUKEMIA

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 148

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Preputial Gland  
Stomach - Forestomach  
Urinary Bladder

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Liver  
Nose  
Salivary Glands  
Thymus

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

MISSING

Mammary Gland

OBSERVATIONS

Eye  
Note: CATARACT TGLs = 2-13,3-13

Lens

Cataract

Mild

Heart  
Kidney

Cardiomyopathy  
Cyst  
Nephropathy

Mild

Marked

Note: NEPHROPATHY TGLs = 9-4  
Pancreas

Acinus  
Artery

Atrophy  
Fibrosis

Moderate

Mild

Note: FIBROSIS TGLs = 7-9  
Pituitary Gland

Pars Distalis

Adenoma  
Keratoacanthoma

Skin  
Note: KERATOACANTHOMA TGLs = 4-10

Spleen  
Testes

Hematopoietic Cell Proliferation  
Adenoma

Mild

Note: ADENOMA TGLs = 6-3  
Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 150

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Prostate  
Stomach - Forestomach  
Trachea

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Seminal Vesicle  
Thymus

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Skin  
Thyroid Gland

OBSERVATIONS

Adrenal Gland  
Heart  
Kidney  
Liver

Medulla

Hyperplasia  
Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Eosinophilic Focus

Mild  
Mild  
Moderate

Bile Duct

Hyperplasia  
Mixed Cell Focus

Mild

Note: [ EOSIN FOCUS ] TGLs = 10-3

Lung  
Mammary Gland

Note: GALACTOCELE TGLs = 5-10

Pancreas  
Parathyroid Gland  
Pituitary Gland

Acinus

Atrophy  
Adenoma  
Adenoma  
Angiectasis

Mild

Note: ADENOMA TGLs = 11-8

Preputial Gland

Note: ADENOMA TGLs = 3-10

Note: ADENOMA TGLs = 2-10.1

Bilateral

Adenoma

Spleen

Testes

Note: ADENOMA TGLs = 6-6

Bilateral, Interstit Cell

Hematopoietic Cell Proliferation  
Adenoma

Mild

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 150

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0.5% 61HM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 151

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Dead

DAY ON TEST: 654

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Parathyroid Gland	Pituitary Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Intestine Large - Colon	Islets, Pancreatic	Mammary Gland	Pancreas
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AUTO PRECLUDES DIAG.

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Adenocarcinoma	Metastatic (Lung)
		Nephropathy	Mild
Note: ADENOCARC	TGLs = 14-4.1		
Note: NEPHROPATHY	TGLs = 12-4+4.1		
Liver		Adenocarcinoma	Metastatic (Lung)
	Bile Duct	Hyperplasia	Moderate
Note: ADENOCARC	TGLs = 10-3.1		
Note: HYPERPLASIA	TGLs = 9-3+3.1		
Lung		Adenocarcinoma	Metastatic (Lung)
	Mediastinum	Adenocarcinoma	
Note: ADENOCARC	TGLs = 4-2		
Note: ADENOCARC	TGLs = 3-1+1.1,5-1+1.1		
Spleen			
Note: MODERATE AUTOLYSIS			
Testes		Bilateral, Interstit Cell	Adenoma
Note: ADENOMA	TGLs = 7-6		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 151

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 654

**DOSE:** 0.5% 61HM

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 152

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Eye	Retina	Atrophy	Mild
[ Atrophy TGLS = 1-13 ]			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
Note: HYALINE INCLUSIONS IN AREA MARKED IN 3.1			
[ Basophilic Focus TGLS = 5-3 ]			
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Interstitial Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
Note: ADENOMA TGLs = 3-6			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 153

TRT#: 3

SEX: Male

DAY ON TEST: 694

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Large - Colon	Prostate
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OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
[ Nephropathy TGLS = 8-4 ]			
Liver		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Hyperplasia	Focal, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 9-3,10-3			
Lung		Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
Note: INFILTRAT CELL TGLs = 2-1+2			
Note: LEUKEMIA MONUC TGLs = 3-1+2			
Lymph Node	Mediastinal	Fibrosis	Moderate
Note: FIBROSIS TGLs = 4-2			
Mammary Gland			
Note: FAT AND CONNECTIVE TISSUE IN SECTIONS 13 AND 13.1.			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

**ANIMAL ID:** 153

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 694

**DOSE:** 0.5% 61HM

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: ADENOMA TGLs = 11-8  
Spleen

Fibrosis  
Hematopoietic Cell Proliferation  
Leukemia Mononuclear

Mild  
Mild

Note: LEUKEMIA MONUC TGLs = 6-3.1  
Testes

Seminif Tub  
Interstit Cell

Atrophy  
Hyperplasia

Moderate  
Minimal

Note: ATROPHY TGLs = 5-6  
Thyroid Gland

C Cell

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 154

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Parathyroid Gland  
Salivary Glands  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pituitary Gland  
Seminal Vesicle  
Thymus

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

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland  
Heart  
Kidney  
Liver  
Pancreas  
Spleen  
Testes

Medulla  
  
Bile Duct  
Acinus  
  
Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Pheochromocytoma Benign  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Hyperplasia  
Hematopoietic Cell Proliferation  
Adenoma  
Atrophy  
Hyperplasia

Mild  
Mild  
Mild  
Minimal  
Mild  
  
Mild  
Minimal

Note: ADENOMA TGLs = 3-6

Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 157

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Note: LEUKEMIA MONUC	TGLs = 10-8		
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 11-3		
Lung		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-1+2 ]		
Lymph Node	Axillary	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 2-9,6-2,8-9		
Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
Note: ADENOMA	TGLs = 12-8		

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 157

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

Spleen

Fibrosis

Mild

Leukemia Mononuclear

Note: NODULE ADJACENT TO THE FIBROTIC AREA

[ Fibrosis TGLS = 13-3.1 ]

[ Leukemia Mononuclear TGLS = 7-3.1 ]

Testes

Bilateral, Interstit Cell

Adenoma

Seminif Tub

Atrophy

Mild

Interstit Cell

Hyperplasia

Mild

Note: ADENOMA TGLs = 9-6

Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 158

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Eye	Retina	Atrophy	Moderate
	Lens	Cataract	Moderate
Note: CATARACT	TGLs = 1-13		
Kidney		Nephropathy	Mild
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
[ Hepatodiaphragmatic Nodule TGLS = 7-3.1 ]			
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 9-8		
Spleen		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Mild
Note: FIBROSIS	TGLs = 5-3		
Stomach	Forestomach	Hyperkeratosis	Moderate
Note: HYPERKERATOSIS	TGLs = 10-7		
Note: CRATER-LIKE CHANGE			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 159

TRT#: 3

SEX: Male

DAY ON TEST: 704

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Brain			
Note: ARE PROBABLY DUE TO THE LARGE PITUITARY MASS			
Note: VENTRICLES DISTENDED. DEPRESSION AND HEAD TILT			
Eye	Lens	Cataract	Mild
Note: CATARACT TGLs = 1-14			
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Mild
Liver		Angiectasis	Mild
		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Marked
Note: ANGIECTASIS TGLs = 5-8			
Testes	Interstit Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 161

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex Bilateral, Medulla	Hyperplasia Pheochromocytoma Benign	Mild
Heart		Cardiomyopathy	Mild
Kidney		Leukemia Mononuclear Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung	[ Alveolar/Bronchiolar Adenoma TGLS = 3-2 ]	Alveolar/Bronchiolar Adenoma	
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis Pars Distalis Pars Distalis	Adenoma Angiectasis Hyperplasia	Mild Mild
Note: ANGIECTASIS TGLs = 9-8			
Note: ADENOMA TGLs = 10-8			
Note: HYPERPLASIA TGLs = 11-8			
Spleen		Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell Interstit Cell	Adenoma Hyperplasia	Mild
Note: ADENOMA TGLs = 5-6,6-6			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 161

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0.5% 61HM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 162

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 676

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Fatty Change	Diffuse, Mild
	Bile Duct	Hyperplasia	Mild
[ Hyperplasia TGLS = 2-3+3.1,3-3+3.1 ]			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 4-8			
Skin	Subcut Tiss	Fibrosarcoma	
Note: FIBROSARC TGLs = 1-13+13.1			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 164

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Large - Colon	Mammary Gland	Parathyroid Gland	Prostate
Urinary Bladder			

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Clear Cell Focus	
		Hyperplasia	Mild
		Leukemia Mononuclear	
Note: EARLY LEUKEMIA OR LEUKEMOID REACTION			
Lung	Alveolar Epith	Fibrosis	Mild
		Hyperplasia	Mild
		Leukemia Mononuclear	
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Basophilic Focus	
Preputial Gland		Inflammation	Chronic Active, Moderate
Note: INFLAMMATION TGLs = 3-10			
Spleen		Hematopoietic Cell Proliferation	Mild
		Leukemia Mononuclear	
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 164

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0.5% 61HM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: ADENOMA TGLs = 4-6

Thyroid Gland

Follicular Cel

Adenoma

Note: ADENOMA TGLs = 8-8

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 166

TRT#: 3

SEX: Male

DAY ON TEST: 714

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Parathyroid Gland	Skin
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OBSERVATIONS

Adrenal Gland Note: PHEOCHROM BGN TGLs = 9-8	Medulla	Pheochromocytoma Benign	
Eye Note: CATARACT TGLs = 2-13	Lens	Cataract	Mild
Heart		Cardiomyopathy Thrombosis	Mild Mild
Kidney		Cyst Nephropathy	Moderate
Liver  Note: [ EOSIN FOCUS ] TGLs = 11-3.1 Note: ANOM HEPAT LOB TGLs = 10-3.1	Bile Duct	Basophilic Focus Eosinophilic Focus Hepatodiaphragmatic Nodule Hyperplasia	Mild
Lung		Metaplasia	Osseous, Minimal
Pancreas	Acinus	Atrophy	Minimal
Spleen		Hematopoietic Cell Proliferation	Mild
Testes Note: ADENOMA TGLs = 8-6	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 166

**TRT#:** 3

**DOSE:** 0.5% 61HM

**SEX:** Male

**DISP:** Moribund

**DAY ON TEST:** 714

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 168

TRT#: 3

SEX: Male

DAY ON TEST: 694

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Mesentery
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Brain		Astrocytoma Malignant	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY TGLs = 8-4			
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 9-3			
Lung		Infiltration Cellular	Histiocyte, Minimal
Pancreas	Acinus	Atrophy	Mild
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-3			
Note: NOT CONVINCING FOR LEUKEMIA			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 3-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 172

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Mild
Liver		Clear Cell Focus	
	Bile Duct	Hyperplasia	Moderate
Pancreas	Acinus	Atrophy	Mild
Parathyroid Gland		Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 3-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 173

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Note: CONGESTED			
Lymph Node			
Note: BLOOD VESSELS IN INGUINUM FILLED WITH BLOOD			
Note: AND ARTERIAL WALLS THICKENED			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 3-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 174

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA TGLs = 5-8			
Note: NUMEROUS ACIDOPHILS IN ONE NODULE			
Skin		Cyst Epithelial Inclusion	
		Hyperkeratosis	Moderate
Note: HYPERKERATOSIS TGLs = 2-13			
Spleen			
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 4-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 174

**TRT#:** 3

**DOSE:** 0.5% 61HM

**SEX:** Male

**DISP:** Terminal Sacrifice

**DAY ON TEST:** 729

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 175

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Eye	Lens	Cataract	Mild
Note: CATARACT TGLs = 2-13			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 5-3			
Nose		Inflammation	Acute, Minimal
Pancreas	Acinus	Adenoma	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 3-10			
Spleen		Hematopoietic Cell Proliferation	Mild
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 178

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Thyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Trachea

MISSING

Mammary Gland

Thymus

OBSERVATIONS

Adrenal Gland  
Note: PHEOCHROM BGN TGLs = 3-8  
Heart  
Kidney

Medulla

Pheochromocytoma Benign

Cardiomyopathy  
Cyst  
Hydronephrosis  
Nephropathy

Mild  
Mild  
Moderate

Note: HYDRONEPHROSIS TGLs = 4-4

Liver  
Pancreas

Bile Duct  
Acinus  
Acinus

Hyperplasia  
Basophilic Focus  
Hyperplasia

Mild  
Mild

Note: HYPERPLASIA TGLs = 6-9

Pituitary Gland

Pars Distalis  
Pars Distalis  
Pars Distalis

Adenoma  
Angiectasis  
Hyperplasia

Mild  
Mild

Note: ADENOMA TGLs = 5-8

Testes

Bilateral, Interstit Cell  
Seminif Tub  
Interstit Cell

Adenoma  
Atrophy  
Hyperplasia

Moderate  
Mild

Note: ADENOMA TGLs = 2-6

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 178

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0.5% 61HM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 179

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 715

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Mammary Gland
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OBSERVATIONS

Brain			
Note: CAUSED BY PITUITARY MASS			
Note: DISTENDED VENTRICLES AND DEPRESSION PROBABLY			
Kidney		Nephropathy	Mild
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 8-3+3.1			
Note: ANOM HEPAT LOB TGLs = 9-3.1			
Lung	Alveolar Epith	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 10-8			
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA OR LEUKEMOID REACTION			
Note: LEUKEMIA MONUC TGLs = 7-3			
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 179

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 715

**DOSE:** 0.5% 61HM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: ADENOMA TGLs = 6-6

Tongue

Squamous Cell Papilloma

Note: PAPILLOMA SQUA TGLs = 5-14

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 180

TRT#: 3

SEX: Male

DAY ON TEST: 588

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Leukemia Mononuclear	
		Necrosis	Minimal
Note: LEUKEMIA MONUC TGLs = 10-3			
Lung		Lymphoma Malignant Undifferentiated Cell Type	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-2.1			
Note: LEUKEMIA MONUC TGLs = 6-8			
Note: LEUKEMIA MONUC TGLs = 4-9			
Note: LEUKEMIA MONUC TGLs = 8-8.1			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Lymphoma Malignant Undifferentiated Cell Type	
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 3-10			
Prostate	Epithelium	Hyperplasia	Minimal

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 180	<b>TRT#:</b> 3 <b>DOSE:</b> 0.5% 61HM	<b>SEX:</b> Male <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 588 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen Note: LEUKEMIA MONUC TGLs = 7-3		Leukemia Mononuclear	
Testes	Interstit Cell Interstit Cell	Adenoma Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 181

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Intestine Large	Colon	Parasite	Mild
Islets, Pancreatic		Adenoma	
Note: ADENOMA TGLs = 6-9			
Note: MORE LIKE CARCINOMA			
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
Note: LEUKEMIA MONUC TGLs = 8-3		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2-1+2			
Lymph Node	Mediastinal	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-8	Mesenteric	Leukemia Mononuclear	
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Atrophy	Minimal
	Acinus	Basophilic Focus	
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 9-8			
Spleen		Hematopoietic Cell Proliferation	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 181	<b>TRT#:</b> 3 <b>DOSE:</b> 0.5% 61HM	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 729 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
Note: LEUKEMIA MONUC TGLs = 4-3.1 Testes	Bilateral, Interstit Cell Seminif Tub Interstit Cell	Leukemia Mononuclear Adenoma Atrophy Hyperplasia	Mild Mild
Note: ADENOMA TGLs = 3-6 Thyroid Gland	C Cell	Hyperplasia	Minimal
<b>PRIMARY CAUSE OF DEATH</b>	-		

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 182

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 5-8			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 2-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 183

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Kidney		Nephropathy	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 2-6,3-6		
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 184

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Intestine Large	Colon	Parasite	Mild
	Rectum	Parasite	Mild
Kidney		Nephropathy	Mild
Liver		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
Note: ANOM HEPAT LOB TGLs = 4-3			
Lung		Alveolar/Bronchiolar Adenoma	
Note: ALV BRON ADEN TGLs = 5-1			
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA TGLs = 3-6			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 185

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**OBSERVATIONS**

Heart		Cardiomyopathy	Mild
		Thrombosis	Moderate
	[ Cardiomyopathy TGLS = 4-2.1 ]		
Kidney		Nephropathy	Moderate
Liver		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
		Necrosis	Moderate
Pancreas	Acinus	Atrophy	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA	TGLs = 2-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 186

TRT#: 3

SEX: Male

DAY ON TEST: 658

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Prostate	Seminal Vesicle
----------	-----------------

OBSERVATIONS

Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Adenoma	
	Acinus	Atrophy	Minimal
Testes	Bilateral, Interstit Cell	Adenoma	

Note: ADENOMA TGLs = 2-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 187

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 702

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Brain			
Note: VENTRICLES DISTENDED			
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 8-3+3.1			
Note: HYPERPLASIA TGLs = 7-3+3.1			
Lung		Leukemia Mononuclear	
Mammary Gland		Galactocele	
[ Galactocele TGLS = 2-14 ]			
Pancreas	Acinus	Atrophy	Minimal
	Acinus	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 10-8.1			
Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
Note: NEOVASCULARIZATION IN AREAS			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 187

**TRT#:** 3

**DOSE:** 0.5% 61HM

**SEX:** Male

**DISP:** Moribund

**DAY ON TEST:** 702

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: LEUKEMIA MONUC TGLs = 5-3.1

Testes

Seminif Tub

Atrophy

Moderate

Interstit Cell

Hyperplasia

Mild

Note: ATROPHY TGLs = 3-6,4-6

Urinary Bladder

Calculus Gross Observation

Calculus Micro Observation Only

Note: CALCUS MIC OBS TGLs = 9-9

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 188

TRT#: 3

SEX: Male

DAY ON TEST: 694

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland Note: HYPERPLASIA TGLs = 6-8	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy Leukemia Mononuclear	Mild
Kidney Note: NEPHROPATHY TGLs = 7-4		Nephropathy	Mild
Liver Note: LEUKEMIA MONUC TGLs = 8-3	Bile Duct	Angiectasis Hyperplasia Leukemia Mononuclear	Mild Moderate
Lung Lymph Node Note: LEUKEMIA MONUC TGLs = 4-2	Mediastinal	Leukemia Mononuclear Leukemia Mononuclear	
Nose		Fungus Inflammation	Mild Acute, Mild
Pancreas	Acinus	Atrophy	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Preputial Gland		Inflammation	Chronic Active, Moderate
Spleen Note: THICK FIBROUS CAPSULE		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 188

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 694

**DOSE:** 0.5% 61HM

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

[ Leukemia Mononuclear TGLS = 5-3.1 ]

Testes

Bilateral, Interstit Cell  
Interstit Cell

Adenoma  
Hyperplasia

Mild

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 189

TRT#: 3

SEX: Male

DAY ON TEST: 367

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Prostate  
Spleen  
Thymus

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Pancreas  
Seminal Vesicle  
Stomach - Glandular  
Trachea

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Lung  
Parathyroid Gland  
Skin  
Testes  
Urinary Bladder

OBSERVATIONS

Heart  
Kidney  
Liver  
Lymph Node  
Mammary Gland  
Pituitary Gland

Bile Duct  
Mesenteric  
Acinus  
Pars Distalis  
Pars Distalis

Cardiomyopathy  
Nephropathy  
Hyperplasia  
Infiltration Cellular  
Hyperplasia  
Adenoma  
Angiectasis

Minimal  
Mild  
Minimal  
Histiocyte, Minimal  
Mild  
Marked

Note: ANGIECTASIS TGLs = 8-8

Note: ADENOMA TGLs = 8-8

Preputial Gland

Inflammation

Chronic Active, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 190

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
Nose			
Note: BLOOD IN NASAL CAVITY			
Pancreas	Acinus	Atrophy	Minimal
	Artery	Fibrosis	Mild
Note: FIBROSIS TGLs = 7-9			
Parathyroid Gland		Adenoma	
Pituitary Gland	Pars Distalis	Cyst	
Note: RATHKES POUCH CYSTS			
Note: CYST TGLs = 8-8			
Spleen			
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 5-6			
Thyroid Gland	C Cell	Adenoma	
Note: ADENOMA TGLs = 4-8			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 191

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Eye [ Cataract TGLs = 2-13 ]	Lens	Cataract	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
Pancreas	Bile Duct	Hyperplasia	Mild
	Artery	Fibrosis	Mild
	Artery	Inflammation	Chronic Active, Minimal
Note: FIBROSIS TGLs = 6-14			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 3-14			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA TGLs = 5-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 192

TRT#: 3

SEX: Male

DAY ON TEST: 553

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Mammary Gland	Acinus	Hyperplasia	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Minimal
	Pars Intermed	Cyst	Minimal
	Pars Distalis	Hyperplasia	Moderate
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 2-10.1			
Spleen		Hematopoietic Cell Proliferation	Marked
Note: HEMA CELL PROL TGLs = 3-3.1			
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 193

TRT#: 3

SEX: Male

DAY ON TEST: 436

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Intestine Large	Colon	Parasite	Minimal
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Hyperplasia	Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
Mammary Gland	Acinus	Hyperplasia	Mild
Skin		Squamous Cell Carcinoma	
Note: SQUAM CEL CARC TGLs = 1-14			
Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Minimal
Thymus		Cyst	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 195

TRT#: 3

SEX: Male

DAY ON TEST: 430

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Mesentery	Parathyroid Gland
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**OBSERVATIONS**

Kidney		Hydronephrosis	Marked
Note: HYDRONEPHROSIS TGLs = 7,8-4+4.1			
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Mammary Gland	Acinus	Hyperplasia	Minimal
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Preputial Gland		Inflammation	Chronic Active, Minimal
Stomach	Glandular	Mineralization	Minimal
Testes	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 196

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Note: [ HYPERPLASIA ] TGLs = 7-3			
Pituitary Gland	Pars Distalis	Adenoma	Multiple
Note: ONE ADENOMA IS COMPRISED OF ACIDOPHILS			
Preputial Gland		Adenoma	
Note: [ ADENOMA ] TGLs = 2-10			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	
Note: [ ADENOMA ] TGLs = 4-6.1,5-6			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 198

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Intestine Large	Colon	Parasite	Mild
Kidney		Nephropathy	Moderate
Liver		Angiectasis	Mild
		Basophilic Focus	
		Eosinophilic Focus	
Note: BASOPH FOCUS TGLs = 8-3.1	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
	Artery	Fibrosis	Moderate
	Artery	Inflammation	Chronic Active, Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 3-10			
Spleen		Hematopoietic Cell Proliferation	Mild
Note: CONGESTED			
Testes	Bilateral, Interstit Cell	Adenoma	
Note: ADENOMA TGLs = 5-6,6-6			
Thyroid Gland	C Cell	Hyperplasia	Minimal
	Follicular Cel	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 198

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** 0.5% 61HM

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 199

TRT#: 3

SEX: Male

DAY ON TEST: 605

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Note: LEUKEMIA MONUC TGLs = 7-4			
Liver		Fatty Change	Focal, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: FATTY CHANGE TGLs = 8-3			
Note: LEUKEMIA MONUC TGLs = 8-3			
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
	Mesenteric	Leukemia Mononuclear	
Nose		Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Mild
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Cyst	

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 199

TRT#: 3

SEX: Male

DAY ON TEST: 605

DOSE: 0.5% 61HM

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

Pars Distalis

Hyperplasia

Moderate

Pars Distalis

Leukemia Mononuclear

Note: CYST TGLs = 9-8

Preputial Gland

Inflammation

Chronic Active, Minimal

Leukemia Mononuclear

Skin

Acanthosis

Mild

Hyperkeratosis

Marked

Leukemia Mononuclear

Note: HYPERKERATOSIS TGLs = 2-13

[ Hyperkeratosis TGLS = 2-13 ]

Spleen

Leukemia Mononuclear

[ Leukemia Mononuclear TGLS = 6-3 ]

Stomach

Forestomach

Necrosis

Marked

Testes

Bilateral, Interstit Cell

Adenoma

Seminif Tub

Atrophy

Moderate

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 4-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 201

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 696

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
	Medulla	Hyperplasia	Mild
Eye	Retina	Atrophy	Mild
[ Atrophy TGLS = 2-13 ]			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Degeneration	Cystic, Minimal
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
	Acinus	Hyperplasia	Mild
Note: ACINUS HYPERPLASIA ON SLIDE #7.			
Pituitary Gland	Pars Distalis	Adenoma	Multiple
Preputial Gland		Adenoma	
Note: ADENOMA TGLs = 3-10.1			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 6-3.1			
Testes	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 202

TRT#: 3

SEX: Male

DAY ON TEST: 557

DOSE: 0.5% 61HM

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Islets, Pancreatic	Lymph Node - Mandibular	Nose
Pancreas	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Thymus
Thyroid Gland	Trachea		

MISSING

Parathyroid Gland

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Spleen	Stomach - Glandular	Urinary Bladder

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
	Medulla	Hyperplasia	Minimal
Heart		Cardiomyopathy	Mild
Intestine Large	Rectum	Parasite	Minimal
Kidney		Nephropathy	Minimal
Liver		Fatty Change	Focal, Minimal
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
	[ Hepatodiaphragmatic Nodule TGLS = 7-3.1 ]		
Lung		Infiltration Cellular	Histiocyte, Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
Mammary Gland	Acinus	Hyperplasia	Mild
Mesentery	Fat	Inflammation	Chronic Active, Moderate
	Fat	Necrosis	Moderate
Note: NECROSIS TGLs = 5-13			
Note: INFLAMMATION TGLs = 5-13			
Pituitary Gland	Pars Distalis	Adenoma	
Testes	Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 202

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 557

**DOSE:** 0.5% 61HM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 203

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Harderian Gland
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	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Mammary Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Cyst	
		Nephropathy	Moderate
Liver		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Skin		Cyst Epithelial Inclusion	
		Hyperkeratosis	Marked
Note: HYPERKERATOSIS	TGLs = 3-13		
Spleen		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Mild
Note: FIBROSIS	TGLs = 8-3		
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Mild
	Interstit Cell	Hyperplasia	Minimal
Note: ADENOMA	TGLs = 6-6,7-6		

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 203

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 730

**DOSE:** 0.5% 61HM

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 204

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 570

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Intestine Large - Cecum
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Nose	Parathyroid Gland	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	

MISSING

Mammary Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Note: PHEOCHROM BGN TGLs = 7-8			
Bone Marrow		Leukemia Mononuclear	
Brain		Hemorrhage	Minimal
		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Intestine Large	Colon	Parasite	Minimal
Islets, Pancreatic		Adenoma	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 9-3 ]			
Lung		Fibrosis	Mild
		Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
Note: FIBROSIS TGLs = 4-1+2			
Note: LEUKEMIA MONUC TGLs = 4-1+2			
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
	Mandibular	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 204

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 570

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

Mediastinal  
Mesenteric

Leukemia Mononuclear  
Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 6-8  
Note: LEUKEMIA MONUC TGLs = 10-9  
Note: LEUKEMIA MONUC TGLs = 3-7

Pancreas  
Pituitary Gland

Pars Distalis  
Pars Distalis  
Pars Distalis

Leukemia Mononuclear  
Adenoma  
Hyperplasia  
Leukemia Mononuclear

Mild

Note: ADENOMA TGLs = 11-8

Preputial Gland  
Prostate  
Salivary Glands  
Skin  
Spleen

Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

[ Leukemia Mononuclear TGLS = 5-3 ]

Testes

Interstit Cell

Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear

Mild

Urinary Bladder

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 206

TRT#: 3

DOSE: 0.5% 61HM

SEX: Male

DISP: Moribund

DAY ON TEST: 680

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Degeneration	Cystic, Minimal
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-3		
Lung		Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Moderate
Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
Note: ADENOMA	TGLs = 8-8		
Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-3.1 ]		
Testes	Bilateral, Interstit Cell	Adenoma	
	Seminif Tub	Atrophy	Moderate
	Interstit Cell	Hyperplasia	Mild
Note: ADENOMA	TGLs = 4-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 210

TRT#: 3

SEX: Male

DAY ON TEST: 730

DOSE: 0.5% 61HM

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Skin

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Moderate
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
Mammary Gland		Adenoma	
[ Adenoma TGLS = 4-13 ]			
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
Prostate	Epithelium	Hyperplasia	Mild
Note: HYPERPLASIA TGLs = 6-6			
Spleen		Hematopoietic Cell Proliferation	Mild
Testes	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 1	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 735
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Mild
Mammary Gland		Fibroadenoma	Multiple
		Galactocele	
Note: FIBROADENOMA	TGLs = 1-13,2-14+14.1,3-15,4-16		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 5-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Moderate

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 2	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 736
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 2-13 ]			
Pancreas	Acinus	Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 3-8+5			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

Animal Note: PANCREATIC TUMOR ON SLIDE #7.

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 4 <b>DOSE:</b> UNTREATED 61UF	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 701 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Clitoral Gl			
Note: DISTENDED DUCTS			
Eye		Inflammation	Acute, Marked
Note: INFLAMMATION TGLs = 5-13			
Note: MORE LIKE PANOPHTHALMITIS			
Kidney		Nephropathy	Mild
Note: NEPHROPATHY TGLs = 3-4			
Liver		Basophilic Focus	
		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Mixed Cell Focus	
Note: MIXED CL FOCUS TGLs = 4-3			
Lung		Infiltration Cellular	Histiocyte, Mild
		Squamous Cell Carcinoma	Metastatic (Nose)
Mammary Gland		Fibroadenoma	
		Galactocele	
[ Fibroadenoma TGLS = 2-14 ]			
[ Galactocele TGLS = 8-10 ]			
Nose		Inflammation	Acute, Mild
		Squamous Cell Carcinoma	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 3	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 701
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Moribund	<b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA	TGLs = 6-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 4	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 736
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 2-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Note: CONGESTED			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 5	<b>TRT#:</b> 4 <b>DOSE:</b> UNTREATED 61UF	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 735 <b>HISTO:</b>
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Mild
[ Basophilic Focus TGLS = 3-3 ]			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA TGLs = 4-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Infiltration Cellular	Histiocyte, Moderate
		Pigmentation	Moderate
Note: INFILTRAT CELL TGLs = 2-3.1			
Note: CIRCUMSCRIBED NODULE			
Thyroid Gland	C Cell	Adenoma	
Uterus			
Note: BLOODY AND NECROTIC MASS			

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 8	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 647
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Moribund	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	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 - Mesenteric	Nose	Ovary
Pancreas	Parathyroid Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Trachea
Urinary Bladder	Uterus		

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Eye	Lens	Cataract	Mild
Note: CATARACT	TGLs = 5-13		
Kidney		Nephropathy	Minimal
Liver		Fatty Change	Focal, Mild
		Inflammation	Granulomatous, Minimal
Note: FATTY CHANGE	TGLs = 3-3		
Mammary Gland		Fibroadenoma	Multiple
		Galactocele	
Note: FIBROADENOMA	TGLs = 1-14+14.1,2-15		
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 4-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

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<b>ANIMAL ID:</b> 9	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 735
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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**NORMAL**

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

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**MISSING**

Thymus

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**OBSERVATIONS**

Adrenal Gland	Cortex	Adenoma	
	Medulla	Hyperplasia	Minimal
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 1-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

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PRIMARY CAUSE OF DEATH

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 11

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 735

**DOSE:** UNTREATED 61UF

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Bone Marrow

Brain

Esophagus

Intestine Large - Cecum

Intestine Large - Colon

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lymph Node - Mandibular

Lymph Node - Mesenteric

Nose

Ovary

Pancreas

Salivary Glands

Skin

Stomach - Forestomach

Stomach - Glandular

Thymus

Trachea

Urinary Bladder

Uterus

**MISSING**

Clitoral Gland

Intestine Large - Rectum

Parathyroid Gland

**OBSERVATIONS**

Clitoral GI

Note: GLAND.

Note: MASS ON SLIDE 10 IS MAMMARY GLAND AND NOT CLITORAL

Heart

Cardiomyopathy

Mild

Islets, Pancreatic

Adenoma

Note: ? NODULE WITHIN NODULE ?

Note: ADENOMA TGLs = 3-9

Kidney

Nephropathy

Mild

Liver

Basophilic Focus

Clear Cell Focus

Inflammation

Granulomatous, Minimal

Lung

Infiltration Cellular

Histiocyte, Mild

Mammary Gland

Fibroadenoma

Multiple

Galactocele

Note: FIBROADENOMA TGLs = 1-13,2-10

Pituitary Gland

Pars Distalis

Adenoma

Multiple

Pars Distalis

Angiectasis

Mild

Note: ADENOMA TGLs = 5-8

Spleen

Hematopoietic Cell Proliferation

Mild

Pigmentation

Moderate

Thyroid Gland

C Cell

Adenoma

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 11

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 735

**DOSE:** UNTREATED 61UF

**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: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 13

TRT#: 4

SEX: Female

DAY ON TEST: 710

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Brain		Carcinoma	Metastatic (Pituitary Gland)
Heart		Cardiomyopathy	Minimal
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Fatty Change	Diffuse, Mild
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Mild
Note: INFLAMMATION TGLs = 5-3			
Note: ANOM HEPAT LOB TGLs = 6-3.1			
Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Carcinoma	
Note: CARCINOMA TGLs = 7-8			
Note: THIS IS CALLED CARCINOMA AS IT APPEARS TO			
Note: HAVE METASTASIZED TO THE BRAIN			
Spleen		Pigmentation	Moderate
Note: PIGMENT TGLs = 4-3			
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Moderate
Note: HYPERKERATOSIS TGLs = 8-7			

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 13

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 710

**DOSE:** UNTREATED 61UF

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thyroid Gland

C Cell

Hyperplasia

Minimal

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 14

TRT#: 4

SEX: Female

DAY ON TEST: 728

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Thymus

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Fatty Change	Diffuse, Mild
		Inflammation	Granulomatous, Mild
		Mixed Cell Focus	
Note: MIXED CL FOCUS TGLs = 4-3			
Pancreas	Acinus	Adenoma	
	Acinus	Atrophy	Mild
Parathyroid Gland		Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 5-8			
Spleen		Pigmentation	Moderate
Stomach	Forestomach	Hyperkeratosis	Moderate
Note: HYPERKERATOSIS TGLs = 6-7			
Uterus		Polyp Stromal	
Note: POLYP STROMAL TGLs = 3-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 17

TRT#: 4

SEX: Female

DAY ON TEST: 731

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Islets, Pancreatic	Nose
Ovary	Pancreas	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

MISSING

Intestine Small - Jejunum	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-8		
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Basophilic Focus	
	Bile Duct	Hepatocellular Carcinoma	
		Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-1+2		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 3-14		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 8-8		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

**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:** UNTREATED 61UF

**DISP:** Moribund

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

Skin

Note: LARGE NECROTIC MASS

Spleen

Fibrosis

Mild

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 5-3.1

Thymus

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 19

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
		Fibroadenoma	
Mammary Gland			
Note: FIBROADENOMA	TGLs = 2-13		
Pituitary Gland		Adenoma	Multiple
		Angiectasis	Mild
Note: ADENOMA	TGLs = 4-8		
Skin		Basal Cell Carcinoma	
Note: BASAL CEL CARC	TGLs = 1-13		
Spleen		Hematopoietic Cell Proliferation	Moderate
		Leukemia Mononuclear	
Note: HEMA CELL PROL	TGLs = 3-3		
Thyroid Gland		C Cell	Hyperplasia
			Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 21

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
		Fibroadenoma	
Mammary Gland			
Note: FIBROADENOMA TGLs = 1-13			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal
Uterus			
Note: THE CERVIX WAS REPORTED AS ENLARGED (TGL 3) BUT			
Note: WAS HISTOLOGICALLY NORMAL.			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 22

TRT#: 4

SEX: Female

DAY ON TEST: 531

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Fatty Change	Diffuse, Marked
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: FATTY CHANGE	TGLs = 8-3		
Note: LEUKEMIA MONUC	TGLs = 8-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland	Acinus	Hyperplasia	Marked
Nose		Leukemia Mononuclear	
Ovary		Leukemia Mononuclear	
Note: NORMAL CORPORA LUTEA.			
Note: NODULES OBSERVED ON THE OVARIES BY THE PROSECTOR WERE			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Intermed	Angiectasis	Moderate
	Pars Distalis	Cyst	Mild
	Pars Distalis	Leukemia Mononuclear	
Note: ANGIECTASIS	TGLs = 9-8		
Note: ADENOMA	TGLs = 9-8		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 22

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 531

**DOSE:** UNTREATED 61UF

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Spleen

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 5-3.1

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 24

TRT#: 4

SEX: Female

DAY ON TEST: 625

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland		Adenoma	
Note: ADENOMA	TGLs = 1-10		
Heart		Cardiomyopathy	Minimal
Liver		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
	Acinus	Hyperplasia	Mild
[ Fibroadenoma TGLS = 2-13 ]			
Nose		Inflammation	Acute, Minimal
Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Mild
	Pars Distalis	Hyperplasia	Minimal
Note: HYPERPLASIA	TGLs = 6-8		
Note: ANGIECTASIS	TGLs = 6-8		
Spleen		Hematopoietic Cell Proliferation	Moderate
[ Hematopoietic Cell Proliferation TGLS = 4-3 ]			
Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 25

TRT#: 4

SEX: Female

DAY ON TEST: 645

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland		Adenoma	
Note: LARGE AREA OF HEMORRHAGE			
Note: ADENOMA TGLs = 2-13			
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Galactocele	
Note: GALACTOCELE TGLs = 1-10			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Spinal Cord		Neoplasm Nos	
Note: THIS NEOPLASM IS AN ASTROCYTOMA. ASTROCYTOMA			
Note: IS NOT IN PCT			
Spleen		Hematopoietic Cell Proliferation	Moderate
		Pigmentation	Mild
[ Hematopoietic Cell Proliferation TGLS = 3-3 ]			
Stomach	Forestomach	Necrosis	Mild
Note: NECROSIS TGLs = 4-7			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 26

TRT#: 4

SEX: Female

DAY ON TEST: 699

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Clitoral Gland	Esophagus
Harderian Gland	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Jejunum	Islets, Pancreatic	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Salivary Glands	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Eye	Lens	Cataract	Mild
[ Cataract TGLS = 1-13 ]			
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Intestine Large	Colon	Leukemia Mononuclear	
Intestine Small	Ileum	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
Liver		Fatty Change	Diffuse, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 18-3+3.1,19-3+3.1,20-3+3.1		
Lung		Alveolar/Bronchiolar Adenoma	Multiple
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-1+1.1+2,5-1+1.1+2,6-1+1.1+2		
Note: ALV BRON ADEN	TGLs = 4-1+1.1,6-1+1.1		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-2,10-9,17-8		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**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> UNTREATED 61UF	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 699 <b>HISTO:</b>
<b>ORGAN AND ACCOUNTABLE SITE STATUS</b>			
Mammary Gland Note: FIBROADENOMA TGLs = 2-14+15,3-13		Fibroadenoma	Multiple
Ovary		Leukemia Mononuclear	
Spleen		Hematopoietic Cell Proliferation	Mild
		Leukemia Mononuclear	
[ Hematopoietic Cell Proliferation TGLS = 8-3 ]			
Thymus	Epithel Cell	Hyperplasia	Mild
		Leukemia Mononuclear	
Urinary Bladder		Leukemia Mononuclear	
Uterus	Cervix	Leukemia Mononuclear	
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 15-6.1			
Note: LEUKEMIA MONUC TGLs = 14-6			
<b>PRIMARY CAUSE OF DEATH</b>	-		

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 28

TRT#: 4

SEX: Female

DAY ON TEST: 447

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Fatty Change	Diffuse, Moderate
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-1+2 ]		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-4		
Note: LEUKEMIA MONUC	TGLs = 6-9		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Cyst	Minimal
Note: ADENOMA	TGLs = 10-8		
Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-3		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 29

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Fatty Change	Focal, Minimal
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
		Mixed Cell Focus	
	[ Basophilic Focus TGLS = 7-3+3.1 ]		
	[ Fatty Change TGLS = 6-3 ]		
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 2-13+13.1		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 5-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Infiltration Cellular	Histiocyte, Moderate
	Note: CIRCUMSCRIBED NODULE. POSSIBLE HISTIOCYTIC LYMPHOMA		
	[ Hematopoietic Cell Proliferation TGLS = 4-3 ]		
Uterus			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 29

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 735

**DOSE:** UNTREATED 61UF

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: RED ACELLULAR MASS

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 30

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Uterus

OBSERVATIONS

Eye		Hemorrhage	Minimal
		Inflammation	Acute, Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Moderate
		Mixed Cell Focus	
Note: BASOPH FOCUS	TGLs = 6-3+3.1,7-3+3.1		
Note: MIXED CL FOCUS	TGLs = 5-3+3.1		
Mammary Gland		Fibroadenoma	Multiple
		Galactocele	
Note: FIBROADENOMA	TGLs = 1-13,2-14		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Moderate
Note: ADENOMA	TGLs = 4-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 31

TRT#: 4

SEX: Female

DAY ON TEST: 422

DOSE: UNTREATED 61UF

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Bone Marrow

Clitoral Gland

Esophagus

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Islets, Pancreatic

Lung

Lymph Node - Mandibular

Lymph Node - Mesenteric

Nose

Ovary

Pancreas

Parathyroid Gland

Pituitary Gland

Salivary Glands

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Thymus

Thyroid Gland

Trachea

Uterus

MISSING

Mammary Gland

AUTO PRECLUDES DIAG.

Intestine Large - Cecum

Intestine Small - Jejunum

Urinary Bladder

OBSERVATIONS

Brain

Oligodendroglioma Malignant

Note: OLIGODENDR MAL TGLs = 5-5,6-5

Heart

Cardiomyopathy

Minimal

Kidney

Nephropathy

Minimal

Liver

Bile Duct

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 33

TRT#: 4

SEX: Female

DAY ON TEST: 658

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland		Adenoma	
[ Adenoma TGLS = 4-10 ]			
Eye	Lens	Cataract	Mild
[ Cataract TGLS = 1-13 ]			
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Mild
Lung		Alveolar/Bronchiolar Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 6-8 ]			
Spleen		Pigmentation	Mild
Thyroid Gland	C Cell	Adenoma	
[ Adenoma TGLS = 5-8 ]			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

<b>ANIMAL ID:</b> 34	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 735
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
Mammary Gland		Adenoma	
		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA TGLs = 1-13			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA TGLs = 3-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 36

TRT#: 4

SEX: Female

DAY ON TEST: 723

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
Brain		Hemorrhage	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Moderate
		Mixed Cell Focus	
Mammary Gland		Fibroadenoma	
		Galactocele	
[ Galactocele TGLS = 3-10+13 ]			
Ovary		Cyst	
Note: CYST	TGLs = 5-6		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 7-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal
Uterus		Polyp Stromal	
Note: POLYP STROMAL	TGLs = 6-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 37

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland		Adenoma	
Note: ADENOMA	TGLs = 2-10		
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA	TGLs = 1-13		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Moderate
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 38

TRT#: 4

SEX: Female

DAY ON TEST: 710

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Harderian Gland		Adenoma	
Note: ADENOMA	TGLs = 2-13		
Liver	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA	TGLs = 1-14+14.1		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 39

TRT#: 4

SEX: Female

DAY ON TEST: 612

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Intestine Large	Cecum	Parasite	Minimal
	Rectum	Parasite	Mild
Liver		Basophilic Focus	Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 1,3-14+14.1		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild

[ Adenoma TGLS = 4-8 ]

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 40

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Mammary Gland	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Trachea	Urinary Bladder	Uterus

MISSING

Intestine Large - Rectum

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Eye	Retina	Atrophy	Mild
	Lens	Cataract	Moderate
Note: CATARACT	TGLs = 1-13		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-3		
Lung		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 4-8		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-3.1 ]			

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 40

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 736

**DOSE:** UNTREATED 61UF

**DISP:** Terminal Sacrifice

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thymus

Leukemia Mononuclear

Thyroid Gland

C Cell

Hyperplasia

Minimal

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 41

TRT#: 4

SEX: Female

DAY ON TEST: 700

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Clitoral Gland	Bilateral	Adenoma	
Note: ADENOMA	TGLs = 2-10.1		
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Fatty Change	Focal, Minimal
		Inflammation	Granulomatous, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Mammary Gland		Adenoma	
		Galactocele	
Note: ADENOMA	TGLs = 3-10		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA	TGLs = 7-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Infiltration Cellular	Histiocyte, Moderate

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

---

**ANIMAL ID:** 41

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 700

**DOSE:** UNTREATED 61UF

**DISP:** Moribund

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

Leukemia Mononuclear

[ Hematopoietic Cell Proliferation TGLS = 4-3.1 ]

[ Infiltration Cellular TGLS = 5-3.1 ]

Thyroid Gland

C Cell

Hyperplasia

Minimal

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 42

TRT#: 4

SEX: Female

DAY ON TEST: 692

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lymph Node - Mandibular	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Stomach - Forestomach	Stomach - Glandular
Trachea	Urinary Bladder	Uterus	

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Minimal
Note: NEPHROPATHY	TGLs = 7-4		
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	[ Hyperplasia TGLS = 9-3 ]		
Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-2,6-8,8-4		
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA	TGLs = 2-13+13.1		
Pituitary Gland	Pars Distalis	Cyst	
Note: CYST	TGLs = 10-8		
Skin	Subcut Tiss	Lipoma	
Note: LIPOMA	TGLs = 3-3.1		
Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 5-3.1 ]		
Thymus		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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**ANIMAL ID:** 42

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 692

**DOSE:** UNTREATED 61UF

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thyroid Gland

C Cell

Hyperplasia

Minimal

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 44

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thyroid Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 45

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 735

**DOSE:** UNTREATED 61UF

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Pituitary Gland  
Stomach - Glandular  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Salivary Glands  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Trachea

**OBSERVATIONS**

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Inflammation  
Fibroadenoma

Mild  
Minimal  
Granulomatous, Minimal

Mammary Gland

Note: FIBROADENOMA TGLs = 1-13+13.1

Spleen

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Mild

Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 47	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 735
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<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	Clitoral Gland	Esophagus	Heart
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lung
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	Uterus

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**OBSERVATIONS**

Kidney		Nephropathy	Mild
Liver		Basophilic Focus Inflammation	Granulomatous, Minimal
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 1-8			
Spleen		Pigmentation	Moderate

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**PRIMARY CAUSE OF DEATH** -

---

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 48

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mesenteric

OBSERVATIONS

Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 1-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 50

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Salivary Glands  
Thymus  
Uterus

**OBSERVATIONS**

Adrenal Gland  
Clitoral GI  
Note: DISTENDED DUCT  
Heart  
Kidney  
Liver  
Spleen

Medulla

Hyperplasia

Minimal

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Pigmentation

Mild  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 51

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	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	Lymph Node - Mesenteric	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Eye [ Cataract TGLS = 1-14 ]	Lens	Cataract	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus Inflammation	Granulomatous, Minimal
Note: BASOPH FOCUS TGLs = 8-3			
Lymph Node Note: INFILTRAT CELL TGLs = 4-2	Mediastinal	Infiltration Cellular	Histiocyte, Mild
Mammary Gland  [ Adenoma TGLS = 2-13 ] [ Galactocele TGLS = 3-10 ]		Adenoma Fibroadenoma Galactocele	
Pituitary Gland  Note: ADENOMA TGLs = 6-8	Pars Distalis Pars Distalis	Adenoma Angiectasis	Mild
Spleen		Hematopoietic Cell Proliferation Pigmentation	Mild Mild
Uterus Note: MUCIFIED EPITHELIUM LINING CERVIX			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 52

TRT#: 4

SEX: Female

DAY ON TEST: 650

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lymph Node - Mandibular	Mammary Gland	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Basophilic Focus	
		Fatty Change	Diffuse, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Basophilic Focus TGLS = 3-3,4-3 ]			
Lung		Leukemia Mononuclear	
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 6-9			
Nose		Leukemia Mononuclear	
Ovary		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 5-8			
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 2-3.1 ]			
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 53

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

OBSERVATIONS

Ear  
Note: COULD AS WELL BE A FIBROSARCOMA  
Note: FIBROMA TGLs = 1-15

Fibroma

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hepatodiaphragmatic Nodule  
Fibroadenoma  
Galactocele

Mild  
Moderate

Mammary Gland

Note: FIBROADENOMA TGLs = 2-13,3-14

Pituitary Gland

Pars Distalis  
Pars Distalis

Angiectasis  
Hyperplasia

Mild  
Mild

Note: ANGIECTASIS TGLs = 5-8

Spleen

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 54

TRT#: 4

SEX: Female

DAY ON TEST: 582

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Minimal
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	Minimal
		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
Note: FATTY CHANGE TGLs = 4-3			
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-13,3-13			
Pituitary Gland	Pars Distalis	Adenoma	
[ Adenoma TGLS = 5-8.1 ]			
Stomach	Forestomach	Mineralization	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 55

TRT#: 4

SEX: Female

DAY ON TEST: 702

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Basophilic Focus	
		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
[ Basophilic Focus TGLS = 4-3+3.1 ]			
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	

Note: LEUKEMIA MONUC TGLs = 2-3,3-3.2

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 56

TRT#: 4

SEX: Female

DAY ON TEST: 658

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Skin

OBSERVATIONS

Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia Inflammation	Minimal Granulomatous, Minimal
Mammary Gland		Fibroadenoma	Multiple
Note: FIBROADENOMA	TGLs = 3-14,4-15		
Pituitary Gland	Pars Distalis Pars Distalis	Adenoma Angiectasis	Mild
Note: ADENOMA	TGLs = 7-8		
Spleen		Pigmentation	Mild
Thyroid Gland	C Cell	Adenoma	
Note: ADENOMA	TGLs = 5-8		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 58

TRT#: 4

SEX: Female

DAY ON TEST: 736

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Pituitary Gland  
Stomach - Glandular  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Salivary Glands  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Trachea

OBSERVATIONS

Heart  
Kidney  
Liver  
  
Mammary Gland  
Note: FIBROADENOMA TGLs = 1-13  
Spleen  
  
Thyroid Gland  
Note: ADENOMA TGLs = 2-8

Bile Duct

C Cell

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Fibroadenoma  
  
Hematopoietic Cell Proliferation  
Pigmentation  
Adenoma

Mild  
Mild  
  
Minimal  
Granulomatous, Minimal  
  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 59

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 600

**DOSE:** UNTREATED 61UF

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Clitoral Gland	Esophagus	Intestine Large - Rectum	Islets, Pancreatic
Lung	Lymph Node - Mandibular	Nose	Ovary
Parathyroid Gland	Salivary Glands	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Trachea	

**MISSING**

Adrenal Gland - Medulla	Thymus
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**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Kidney	Pancreas	Pituitary Gland
Urinary Bladder	Uterus		

**OBSERVATIONS**

Heart		Cardiomyopathy	Minimal
Liver		Basophilic Focus	Minimal
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Minimal
Note: ANOM HEPAT LOB TGLs = 5-3.1			
Lymph Node	Mediastinal	Carcinoma	Metastatic (Thyroid Gland)
	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Mammary Gland	Acinus	Hyperplasia	Mild
Thyroid Gland	C Cell	Carcinoma	
[ Carcinoma TGLS = 2-8.1 ]			

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 60

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

OBSERVATIONS

Kidney  
Liver

Nephropathy  
Basophilic Focus  
Mixed Cell Focus

Mild

Note: MIXED CL FOCUS TGLs = 3-3.1

Mammary Gland

Note: FIBROADENOMA TGLs = 1-13

Pituitary Gland

Pars Distalis  
Pars Distalis

Fibroadenoma

Adenoma  
Angiectasis

Mild

Note: ADENOMA TGLs = 4-8

Spleen

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 61

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

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

**MISSING**

Intestine Large - Colon	Parathyroid Gland
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**OBSERVATIONS**

Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA TGLs = 2-14			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ANGIECTASIS TGLs = 4-8			
Spleen		Hematopoietic Cell Proliferation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 62

TRT#: 4

SEX: Female

DAY ON TEST: 409

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Intestine Large	Colon	Parasite	Minimal
	Rectum	Parasite	Minimal
Liver		Basophilic Focus	Minimal
	Bile Duct	Hyperplasia	Minimal
Lung		Adenocarcinoma	Metastatic (Mammary Gland)
[ Adenocarcinoma TGLS = 2-1 ]			
Lymph Node	Mandibular	Adenocarcinoma	Metastatic (Mammary Gland)
	Mesenteric	Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Adenocarcinoma	
Note: ADENOCARC TGLs = 1-13			
Ovary		Cyst	
Note: CYST TGLs = 3-6			
Pituitary Gland	Pars Distalis	Cyst	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 64

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

OBSERVATIONS

Clitoral Gland  
Note: ADENOMA TGLs = 2-10  
Heart  
Kidney  
Liver  
Note: HYPERPLASIA TGLs = 4-3  
Note: DISTENDED VASCULAR SPACES.  
Mammary Gland  
Note: FIBROADENOMA TGLs = 1-13  
Pituitary Gland  
Note: HYPERPLASIA TGLs = 5-8  
Spleen

Bile Duct  
Pars Distalis

Adenoma  
Cardiomyopathy  
Cyst  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Hyperplasia  
Inflammation  
Granulomatous, Minimal  
Fibroadenoma  
Hyperplasia  
Mild  
Mild  
Mild  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

**ANIMAL ID:** 67

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 735

**DOSE:** UNTREATED 61UF

**DISP:** Terminal Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Trachea

**OBSERVATIONS**

Clitoral Gland  
Note: ADENOMA TGLs = 1-13

Heart  
Kidney  
Liver

Pituitary Gland  
Note: ADENOMA TGLs = 3-8

Spleen

Pars Distalis  
Pars Distalis

Adenoma  
Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Inflammation  
Leukemia Mononuclear  
Adenoma  
Angiectasis  
Leukemia Mononuclear  
Pigmentation  
Mild  
Mild  
Granulomatous, Minimal  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 68

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: UNTREATED 61UF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Stomach - Forestomach

Bone  
Esophagus  
Intestine Small - Duodenum  
Nose  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Parathyroid Gland

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Salivary Glands

MISSING

Skin

OBSERVATIONS

Adrenal Gland

Medulla

Pheochromocytoma Malignant

Note: PHEOCHROM MAL TGLs = 12-8.1

Note: HENCE IT IS CALLED AS A MALIGNANT NEOPLASM

Note: TUMOR CELLS HAVE INFILTRATED INTO THE CAPSULE

Heart

Leukemia Mononuclear

Kidney

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 13-4.1,15-4

Liver

Leukemia Mononuclear

[ Leukemia Mononuclear TGLS = 18-3 ]

Lung

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 8-1+2

Lymph Node

Mandibular

Leukemia Mononuclear

Mediastinal

Leukemia Mononuclear

Mesenteric

Leukemia Mononuclear

Pancreatic

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 4-9,7-2.1,11-9

Mammary Gland

Fibroadenoma

Multiple

Note: LEUKEMIC INFILTRATE IN #14

Note: FIBROADENOMA TGLs = 1-13,2-14

Mesentery

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 14-4.1

Ovary

Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 68	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 735
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Pancreas		Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 10-9	
Pituitary Gland	Pars Distalis	Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 19-8	
Skeletal Muscle		Leukemia Mononuclear
Spleen		Leukemia Mononuclear
[ Leukemia Mononuclear TGLS = 9-3 ]		
Stomach	Glandular	Leukemia Mononuclear
Thymus		Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 20-2.1	
Thyroid Gland		Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 5-8	
Urinary Bladder		Leukemia Mononuclear
Uterus		Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 16-6,17-6	

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 69

TRT#: 4

SEX: Female

DAY ON TEST: 658

DOSE: UNTREATED 61UF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Nose	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Brain		Hemorrhage	Mild
		Leukemia Mononuclear	
Note: HEMORRHAGE	TGLs = 12-12		
Clitoral Gland		Necrosis	Moderate
Note: NECROSIS	TGLs = 4-10		
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Fatty Change	Diffuse, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 10-3		
Lung		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLs = 6-1+2 ]			
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-9,5-2,9-8		
Mammary Gland		Fibroadenoma	Multiple
Note: FIBROADENOMA	TGLs = 1-13,2-14		
Ovary		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:45  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 69	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 658
	<b>DOSE:</b> UNTREATED 61UF	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA Spleen	TGLs = 11-8	Pars Distalis	Leukemia Mononuclear	
Note: LEUKEMIA MONUC Thymus	TGLs = 7-3.1,8-3.1		Hematopoietic Cell Proliferation Leukemia Mononuclear	Minimal
Uterus			Leukemia Mononuclear Polyp Stromal	

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PRIMARY CAUSE OF DEATH

---

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 71

TRT#: 5

SEX: Female

DAY ON TEST: 713

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**OBSERVATIONS**

Heart		Cardiomyopathy	Mild
Liver		Basophilic Focus	
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 2-14+15		
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Note: HYPERPLASIA	TGLs = 6-8		
Spleen		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 72

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Hepatocellular Adenoma	
Note: [ HEPATOCLR ADEN ] TGLs = 3-3			
Mammary Gland		Galactocele	
Note: GALACTOCELE TGLs = 2-13			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 4-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 73

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone  
Esophagus  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

**MISSING**

Intestine Large - Rectum

Mammary Gland

**OBSERVATIONS**

Heart  
Kidney  
Liver  
Pituitary Gland  
Spleen  
Uterus

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Adenoma  
Hematopoietic Cell Proliferation

Mild  
Moderate  
Mild

Pars Distalis

Note: DESQUAMATED CELLS AND INFLAMMATORY CELLS.

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 74

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Eye	Lens	Cataract	Mild
Note: CATARACT	TGLs = 2-14		
Heart		Cardiomyopathy	Mild
Liver		Basophilic Focus	
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
		Inflammation	Granulomatous, Minimal
Note: ANOM HEPAT LOB	TGLs = 7-3.1		
Note: [ EOSIN FOCUS ]	TGLs = 8-3.1		
Note: BASOPH FOCUS	TGLs = 9-3+3.1		
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
		Galactocele	
	Acinus	Hyperplasia	Mild
Note: GALACTOCELE	TGLs = 4-16		
Note: HYPERPLASIA	TGLs = 3-13		
Note: FIBROADENOMA	TGLs = 5-17		
Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 74

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 734

**DOSE:** 0.5% 61LF

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: HYPERPLASIA TGLs = 10-8  
Spleen

Hematopoietic Cell Proliferation

Mild

Stomach Glandular

Pigmentation

Mild

Hyperplasia

Minimal

Note: HYPERPLASIA TGLs = 11-7

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 75

TRT#: 5

SEX: Female

DAY ON TEST: 544

DOSE: 0.5% 61LF

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Clitoral Gland	Esophagus	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Islets, Pancreatic	Nose
Ovary	Salivary Glands	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	Uterus

MISSING

Parathyroid Gland

AUTO PRECLUDES DIAG.

Intestine Small - Jejunum

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
Heart		Leukemia Mononuclear	
Intestine Large	Colon	Parasite	Minimal
Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
Liver		Fatty Change	Focal, Moderate
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-3			
Lung		Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 3-1+2 ]			
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland	Acinus	Hyperplasia	Mild
Pancreas		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	Multiple
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Minimal

Note: ANGIECTASIS TGLs = 6-8

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 75

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Dead

**DAY ON TEST:** 544

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA	TGLs = 6-8		
Skin		Subcut Tiss	Fibroma
Note: FIBROMA	TGLs = 2-13+13.1		
Spleen			Leukemia Mononuclear
Note: LEUKEMIA MONUC	TGLs = 4-3		
Thymus			Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 77

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thyroid Gland

OBSERVATIONS

Eye  
Note: CATARACT TGLs = 2-13

Lens

Cataract

Mild

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Leukemia Mononuclear  
Mixed Cell Focus

Mild  
Mild

Note: MIXED CL FOCUS TGLs = 6-3  
Note: LEUKEMIA MONUC TGLs = 5-3

Lung  
Note: LEUKEMIA MONUC TGLs = 3-1+2

Leukemia Mononuclear

Pituitary Gland  
Spleen

Pars Distalis

Hyperplasia  
Leukemia Mononuclear

Mild

Note: LEUKEMIA MONUC TGLs = 4-3

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 78

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Eye [ Cataract TGLS = 2-13 ]	Lens	Cataract	Mild
Kidney Note: A FEW SCLEROSED GLOMERULI		Nephropathy	Mild
Lung		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland  Note: ADENOMA TGLs = 5-8	Pars Distalis Pars Distalis Pars Distalis	Adenoma Angiectasis Hyperplasia	Mild Mild
Spleen		Leukemia Mononuclear	
Thyroid Gland	C Cell	Hyperplasia	Mild
Uterus Note: POLYP STROMAL TGLs = 4-6		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 79

TRT#: 5

SEX: Female

DAY ON TEST: 668

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Thymus

OBSERVATIONS

Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Leukemia Mononuclear	
Note: SUGGESTION OF COMPRESSION IN AREA			
Note: BASOPH FOCUS TGLs = 3-3			
Lung		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
Skin	Subcut Tiss	Fibroma	
[ Fibroma TGLS = 1-13+13.1 ]			
Spleen		Leukemia Mononuclear	
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 82

TRT#: 5

SEX: Female

DAY ON TEST: 611

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Lymph Node - Mesenteric	Nose	Ovary	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Trachea	Urinary Bladder	Uterus	

MISSING

Adrenal Gland - Medulla	Parathyroid Gland
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INSUFFICIENT TISSUE

Eye

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Minimal
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
Liver		Fatty Change	Diffuse, Moderate
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
Note: FATTY CHANGE TGLs = 8-3 [ Leukemia Mononuclear TGLS = 8-3 ]			
Lung		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
Mammary Gland	Acinus	Hyperplasia	Mild
Pancreas		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Cyst	
Note: CYST TGLs = 9-8			
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-3 ]			
Thyroid Gland	C Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 82

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Moribund

**DAY ON TEST:** 611

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

C Cell

Hyperplasia

Minimal

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 85

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Small - Ileum

OBSERVATIONS

Clitoral Gland		Adenoma	
Note: ADENOMA	TGLs = 3-10		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Clear Cell Focus	
	Bile Duct	Hyperplasia	Minimal
Ovary		Granulosa Cell Tumor Benign	
Note: GRANLSA TM BGN	TGLs = 4-6		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA	TGLs = 5-8		
Stomach	Forestomach	Hyperkeratosis	Mild
Note: HYPERKERATOSIS	TGLs = 6-7.1		
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 87

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 686

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Harderian Gland
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Nose
Ovary	Parathyroid Gland	Pituitary Gland	Skin
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Clitoral Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 13-8			
Bone Marrow		Leukemia Mononuclear	
Note: INCREASE OF FAT			
Clitoral Gland			
Note: FIBROADENOMA.			
Note: AS CLITORAL GLAND, BUT IS MAMMARY GLAND			
Note: MASS ON SLIDE #10 IS ENLARGED TISSUE REFERRED TO			
Eye	Lens	Cataract	Mild
		Inflammation	Acute, Minimal
Note: CATARACT TGLs = 3-13			
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Fatty Change	Diffuse, Mild
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 12-3+3.1			
Note: ANOM HEPAT LOB TGLs = 11-3.1			
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 87

TRT#: 5

SEX: Female

DAY ON TEST: 686

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

Mediastinal

Leukemia Mononuclear

Mesenteric

Leukemia Mononuclear

Pancreatic

Leukemia Mononuclear

Note: POSSIBILITY OF GRANULOCYTIC LEUKEMIA

Note: LEUKEMIA MONUC TGLs = 5-2,9-8.1

Mammary Gland

Fibroadenoma

Galactocele

Note: FIBROADENOMA TGLs = 4-10

Pancreas

Leukemia Mononuclear

Salivary Glands

Leukemia Mononuclear

Spleen

Fibrosis

Moderate

Note: FIBROSIS TGLs = 8-3

Note: PROBABLY AN INFARCT

Stomach

Forestomach

Acanthosis

Mild

Forestomach

Hyperkeratosis

Mild

Forestomach

Leukemia Mononuclear

Glandular

Leukemia Mononuclear

Thymus

Leukemia Mononuclear

Uterus

Polyp Stromal

Note: POLYP STROMAL TGLs = 7-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 88

TRT#: 5

SEX: Female

DAY ON TEST: 628

DOSE: 0.5% 61LF

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum	Islets, Pancreatic
Parathyroid Gland	Skin	Stomach - Forestomach	Stomach - Glandular
Trachea	Urinary Bladder	Uterus	

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Clitoral Gland		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Intestine Small	Ileum	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Leukemia Mononuclear	

Note: SUGGESTION OF NEOPLASTIC NODULE IN SECTION CIRCLED.

Note: LEUKEMIA MONUC TGLs = 2-3

Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	

Note: LEUKEMIA MONUC TGLs = 4-9

[ Leukemia Mononuclear TGLs = 5-8 ]

Mammary Gland	Acinus	Hyperplasia	Moderate
Nose		Leukemia Mononuclear	
Ovary		Leukemia Mononuclear	
Pancreas	Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 88

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Dead

**DAY ON TEST:** 628

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA TGLs = 3-8

Note: ANGIECTASIS TGLs = 3-8

Salivary Glands

Spleen

Note: LEUKEMIA MONUC TGLs = 1-1.1

Thymus

Thyroid Gland

Leukemia Mononuclear

Leukemia Mononuclear

Leukemia Mononuclear

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 89

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Intestine Small - Duodenum	Mammary Gland
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**OBSERVATIONS**

Kidney		Nephropathy	Mild
Note: A FEW SCLEROSED GLOMERULI			
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Cyst	
Ovary			
Note: CYST TGLs = 2-6.1			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 3-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Stomach	Forestomach	Acanthosis	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 91

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Trachea

**OBSERVATIONS**

Heart  
Kidney  
Liver

Bile Duct

Lung  
Pituitary Gland

Pars Distalis  
Pars Distalis

Note: ADENOMA TGLs = 2-8  
Spleen

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Infiltration Cellular  
Adenoma  
Angiectasis

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Minimal  
Mild  
Granulomatous, Minimal  
Histiocyte, Mild  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 92

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 710

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Brain
Clitoral Gland	Esophagus	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Mammary Gland	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder
Uterus			

MISSING

Intestine Large - Colon

OBSERVATIONS

Bone Marrow		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Mild
Liver		Fatty Change	Diffuse, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-1+2		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-9,6-8		
Note: MORE LIKE LYMPHOCYTIC OR UNDIFFERENTIATED LEUKEMIA			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
	Pars Distalis	Leukemia Mononuclear	
Note: ADENOMA	TGLs = 8-8		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 5-3 ]			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 92

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 710

**DOSE:** 0.5% 61LF

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thymus

Leukemia Mononuclear

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 93

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Uterus

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Trachea

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Urinary Bladder

**MISSING**

Mammary Gland

Pituitary Gland

Thymus

**OBSERVATIONS**

Kidney  
Liver

Bile Duct

Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Mixed Cell Focus

Minimal  
Minimal  
Granulomatous, Minimal

Note: [ MIXED CL FOCUS ] TGLs = 4-3

Spleen  
Thyroid Gland

C Cell

Hematopoietic Cell Proliferation  
Hyperplasia

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 94

TRT#: 5

SEX: Female

DAY ON TEST: 710

DOSE: 0.5% 61LF

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Clitoral Gland  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular

Bone  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thyroid Gland

Brain  
Lymph Node - Mandibular  
Ovary  
Skin  
Trachea

AUTO PRECLUDES DIAG.

Bone Marrow  
Intestine Small - Duodenum

Intestine Large - Cecum  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Spleen

OBSERVATIONS

Heart

Cardiomyopathy  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Necrosis

Mild

Kidney  
Liver

[ Necrosis TGLS = 6-3 ]

Lung  
Pituitary Gland

Pars Distalis

Leukemia Mononuclear  
Hyperplasia

Mild

Note: HYPERPLASIA TGLs = 7-8

Thymus  
Uterus

Leukemia Mononuclear  
Polyp Stromal

Note: [ POLYP STROMAL ] TGLs = 8-6

PRIMARY CAUSE OF DEATH

-

Animal Note: MANY TISSUES AUTOLYZED

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 95

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pancreas  
Spleen  
Trachea

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thymus

**MISSING**

Intestine Small - Jejunum

**OBSERVATIONS**

Kidney  
Liver

Nephropathy  
Basophilic Focus  
Clear Cell Focus  
Inflammation  
Adenoma  
Angiectasis

Mild  
  
Granulomatous, Minimal  
Mild

Pituitary Gland

Pars Distalis  
Pars Distalis

Adenoma  
Polyp Stromal

Note: ADENOMA TGLs = 3-8  
Thyroid Gland  
Uterus

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 96

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 710

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Salivary Glands  
Uterus

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Nose  
Skin

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Ovary  
Thyroid Gland

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Parathyroid Gland  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Clitoral Gland  
[ Adenoma TGLS = 2-13 ]

Adenoma

Heart  
Kidney

Leukemia Mononuclear  
Leukemia Mononuclear  
Nephropathy

Mild

Note: LEUKEMIA MONUC TGLs = 6-4

Liver

Fatty Change  
Leukemia Mononuclear

Diffuse, Mild

Note: LEUKEMIA MONUC TGLs = 7-3,8-3

Lung

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 3-1+2

Note: MORE LIKE LYMPHOSARCOMA

Lymph Node

Mandibular  
Mediastinal  
Mesenteric

Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 5-8

Pancreas

Leukemia Mononuclear

Pituitary Gland

Pars Distalis  
Pars Distalis

Angiectasis  
Hyperplasia

Mild

Mild

Note: ANGIECTASIS TGLs = 9-8

Spleen

Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 96

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 710

**DOSE:** 0.5% 61LF

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

[ Leukemia Mononuclear TGLS = 11-3 ]

Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild
	Forestomach	Leukemia Mononuclear	
	Glandular	Leukemia Mononuclear	
Thymus		Leukemia Mononuclear	
Urinary Bladder		Leukemia Mononuclear	

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 99

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Adenoma  
Angiectasis

Mild  
Minimal  
Minimal  
Granulomatous, Mild  
Mild

Bile Duct

Pituitary Gland

Pars Distalis  
Pars Distalis

Hematopoietic Cell Proliferation

Mild

Note: ADENOMA TGLs = 3-8

Spleen

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 100

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Uterus

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Skin  
Trachea

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Spleen  
Urinary Bladder

MISSING

Thymus

OBSERVATIONS

Clitoral Gland  
Note: ADENOMA TGLs = 2-10

Heart  
Kidney  
Liver

Note: BASOPH FOCUS TGLs = 3-3

Pituitary Gland

Thyroid Gland

Pars Distalis  
Pars Distalis  
C Cell

Adenoma

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Inflammation

Cyst  
Hyperplasia  
Hyperplasia

Mild  
Minimal  
Granulomatous, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 101

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 672

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Esophagus
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular
Nose	Ovary	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-8		
Clitoral Gland		Necrosis	Moderate
Note: NECROSIS	TGLs = 4-10+10.1		
Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Minimal
Liver		Fatty Change	Diffuse, Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 10-1+2		
Lymph Node	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 12-8		
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA	TGLs = 3-10+13		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA	TGLs = 9-8		
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 101

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Moribund

**DAY ON TEST:** 672

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Note: LEUKEMIA MONUC TGLs = 5-3+3.1  
[ Thrombosis TGLS = 6-3.1 ]

Stomach Forestomach

Note: ACANTHOSIS TGLs = 11-7

Thymus

Thrombosis

Mild

Acanthosis

Mild

Leukemia Mononuclear

---

PRIMARY CAUSE OF DEATH

-

---

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 104

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Salivary Glands  
Thymus

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Skin  
Trachea

Bone  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Stomach - Forestomach  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Stomach - Glandular  
Uterus

OBSERVATIONS

Clitoral Gland  
Note: NECROSIS TGLs = 3-10

Kidney  
Liver

Mammary Gland  
Note: FIBROADENOMA TGLs = 2-14,4-13

Pancreas  
Pituitary Gland  
Note: ADENOMA TGLs = 5-8

Spleen

Thyroid Gland

Necrosis Mild

Nephropathy Moderate  
Basophilic Focus

Bile Duct  
Hyperplasia Mild  
Fibroadenoma Multiple

Adenoma  
Adenoma  
Angiectasis Moderate

Hematopoietic Cell Proliferation Mild  
Pigmentation Moderate  
Hyperplasia Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 105

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
[ Basophilic Focus TGLS = 4-3 ]			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA TGLs = 5-8			
Spleen		Infiltration Cellular	Histiocyte, Moderate
Note: INFILTRAT CELL TGLs = 3-3+3.1			
Stomach	Forestomach	Acanthosis	Mild
Note: ACANTHOSIS TGLs = 6-7			
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 106

TRT#: 5

SEX: Female

DAY ON TEST: 664

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Heart  
Kidney  
Liver

Bile Duct

Pituitary Gland

Pars Distalis  
Pars Distalis

Cardiomyopathy  
Nephropathy  
Hyperplasia  
Inflammation  
Adenoma  
Angiectasis

Mild  
Mild  
Minimal  
Granulomatous, Minimal  
Multiple  
Mild

Note: ADENOMA TGLs = 5-8

Note: PROBABLE ADENOMA - PARS INTERMEDIA.

Spleen

Pigmentation

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 109

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Mild
Note: A FEW SCLEROSED GLOMERULI			
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
		Fibroadenoma	
Mammary Gland			
Note: FIBROADENOMA TGLs = 2-13			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 4-8			
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 110

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
Lymph Node	Mesenteric	Degeneration	Cystic, Moderate
Note: DEGEN TGLs = 6-8			
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA TGLs = 2-13			
Ovary		Cyst	
Note: CYST TGLs = 4-6			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 8-8			
Spleen		Fibrosis	Mild
		Hematopoietic Cell Proliferation	Mild
Note: FIBROSIS TGLs = 5-3			
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:45

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

**Lab:** TSI MASON

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**ANIMAL ID:** 110

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Terminal Sacrifice

**DAY ON TEST:** 735

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 111

TRT#: 5

SEX: Female

DAY ON TEST: 685

DOSE: 0.5% 61LF

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular	Stomach - Forestomach
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OBSERVATIONS

Kidney		Nephropathy	Mild
Liver		Fatty Change	Diffuse, Mild
Note: FATTY CHANGE	TGLs = 6-3		
Parathyroid Gland		Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ANGIECTASIS	TGLs = 7-8		
Note: ADENOMA	TGLs = 8-8		
Skin	Subcut Tiss	Fibroma	
Note: FIBROMA	TGLs = 1-13		
Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 112

TRT#: 5

SEX: Female

DAY ON TEST: 735

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Mammary Gland	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Mild
		Mixed Cell Focus	
		Necrosis	Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Spleen		Pigmentation	Mild

Note: CONGESTED

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 113

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 545

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Clitoral Gland  
Intestine Large - Colon  
Islets, Pancreatic  
Ovary  
Stomach - Glandular  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Pancreas  
Thymus

Bone Marrow  
Heart  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Salivary Glands  
Trachea

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Nose  
Stomach - Forestomach  
Urinary Bladder

MISSING

Parathyroid Gland

INSUFFICIENT TISSUE

Adrenal Gland - Medulla

OBSERVATIONS

Intestine Large  
Kidney  
Liver

Rectum

Parasite  
Nephropathy  
Basophilic Focus  
Inflammation

Minimal  
Minimal  
Minimal  
Granulomatous, Minimal

Lung

Adenosquamous Carcinoma  
Alveolar/Bronchiolar Adenoma  
Infiltration Cellular

Metastatic (Skin)  
Histiocyte, Minimal

Note: CARC ADENOSQUA TGLs = 7-1.1

Mammary Gland

Acinus

Hyperplasia

Mild

Pituitary Gland

Pars Distalis

Cyst

Mild

Skin

Adenosquamous Carcinoma

Note: AND SEBACEOUS COMPONENT.

Note: CARC ADENOSQUA TGLs = 3-13

Spleen

Hematopoietic Cell Proliferation

Marked

Note: HEMA CELL PROL TGLs = 5-3.1

Thyroid Gland

C Cell

Hyperplasia

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:45

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 114

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Eye	Lens	Cataract	Moderate
Note: CATARACT	TGLs = 1-13		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Basophilic Focus	
		Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Ovary		Cyst	
Note: CYST	TGLs = 5-6		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA	TGLs = 7-8		
Skel Muscle			
Note: BLOOD AROUND SKELETAL MUSCLE BECAUSE OF THYROID TUMOR.			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Moderate
Thyroid Gland	Follicular Cel	Adenoma	
Note: ADENOMA	TGLs = 6-8.1		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 114

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Terminal Sacrifice

**DAY ON TEST:** 735

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 115

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Clitoral Gland Note: NECROSIS TGLs = 7-10		Necrosis	Mild
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Basophilic Focus Hyperplasia Inflammation	Mild Granulomatous, Minimal
Note: SUGGESTION OF HYPERPLASIA OR NODULE IN Mammary Gland Note: FIBROADENOMA TGLs = 2-13+13.1		Fibroadenoma	
Pituitary Gland Note: ADENOMA TGLs = 4-8	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland Note: ADENOMA TGLs = 3-8	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 116

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Brain

Intestine Small - Duodenum

Lung

Pancreas

Thyroid Gland

Adrenal Gland - Medulla

Clitoral Gland

Intestine Small - Ileum

Lymph Node - Mesenteric

Salivary Glands

Trachea

Bone

Intestine Large - Cecum

Intestine Small - Jejunum

Nose

Skin

Urinary Bladder

Bone Marrow

Intestine Large - Colon

Islets, Pancreatic

Ovary

Stomach - Glandular

Uterus

MISSING

Esophagus

Thymus

Intestine Large - Rectum

Lymph Node - Mandibular

Parathyroid Gland

OBSERVATIONS

Heart

Kidney

Liver

Cardiomyopathy

Nephropathy

Basophilic Focus

Hyperplasia

Inflammation

Mixed Cell Focus

Mild

Mild

Minimal

Granulomatous, Minimal

Note: [ MIXED CL FOCUS ] TGLs = 3-3

Mammary Gland

Note: FIBROADENOMA TGLs = 2-13

Pituitary Gland

Spleen

Stomach

Note: ACANTHOSIS TGLs = 4-7.1

Bile Duct

Pars Distalis

Forestomach

Fibroadenoma

Adenoma

Pigmentation

Acanthosis

Mild

Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 117

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Note: LEUKEMIA MONUC	TGLs = 4-8		
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: ANOM HEPAT LOB	TGLs = 5-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 2-1+2		
Ovary		Cyst	
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA	TGLs = 6-8		
Spleen		Leukemia Mononuclear	
Uterus			
Note: THE CERVIX WAS REPORTED AS ENLARGED, BUT WAS			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 117

**TRT#:** 5

**SEX:** Female

**DAY ON TEST:** 735

**DOSE:** 0.5% 61LF

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: HISTOLOGICALLY NORMAL.

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 118

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Mammary Gland

OBSERVATIONS

Clitoral Gland		Adenoma	
[ Adenoma TGLS = 3-10.1 ]			
Eye	Lens	Cataract	Moderate
[ Cataract TGLS = 2-13 ]			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
		Cyst	
Ovary			
Note: CYST TGLs = 4-6			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA TGLs = 7-8			
Spleen		Leukemia Mononuclear	
Uterus		Polyp Stromal	
Note: POLYP STROMAL TGLs = 5-6.1			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 120

TRT#: 5

SEX: Female

DAY ON TEST: 478

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Stomach - Forestomach	Urinary Bladder
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**OBSERVATIONS**

Kidney		Nephropathy	Mild
Liver		Basophilic Focus	Minimal
	Bile Duct	Hyperplasia	Minimal
Mammary Gland	Acinus	Hyperplasia	Marked
Pituitary Gland	Pars Distalis	Adenoma	

Note: ADENOMA TGLs = 6-8

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 121

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Islets, Pancreatic  
Ovary  
Skin  
Thyroid Gland

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Small - Duodenum  
Lung  
Pancreas  
Stomach - Forestomach  
Trachea

Bone  
Esophagus  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Thymus  
Uterus

MISSING

Intestine Large - Rectum

Lymph Node - Mandibular

OBSERVATIONS

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Fibroadenoma

Mild  
Minimal  
Minimal  
Granulomatous, Minimal

Bile Duct

Mammary Gland

Note: FIBROADENOMA TGLs = 2-13

Pituitary Gland

Note: ADENOMA TGLs = 4-8

Pars Distalis

Adenoma

Spleen

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 123

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thyroid Gland

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Trachea

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

OBSERVATIONS

Clitoral Gland  
Note: NECROSIS TGLs = 11-10

Heart  
Kidney  
Liver

Necrosis  
Cardiomyopathy  
Nephropathy  
Inflammation  
Mixed Cell Focus

Mild  
Mild  
Minimal  
Granulomatous, Minimal

Note: MIXED CL FOCUS TGLs = 7-3.1

Lung  
Pituitary Gland

Pars Distalis

Infiltration Cellular  
Adenoma

Histiocyte, Minimal

Note: ADENOMA TGLs = 8-8

Spleen  
Uterus

Endometrium

Pigmentation  
Hyperplasia  
Polyp Stromal

Mild  
Mild  
Multiple

Note: POLYP STROMAL TGLs = 5-6.1,6-6.1

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 124

TRT#: 5

SEX: Female

DAY ON TEST: 619

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Thymus

OBSERVATIONS

Heart		Cardiomyopathy	Minimal
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	Minimal
Lymph Node	Mesenteric	Infiltration Cellular	Histiocyte, Mild
Mammary Gland		Fibroadenoma	
		Galactocele	Mild
[ Fibroadenoma TGLS = 2-14 ]			
Nose		Fungus	Marked
		Inflammation	Acute, Moderate
Note: NOSE.			
Note: A MAT OF FUNGAL ELEMENTS WAS NOTED IN THE LUMEN OF THE			
Pituitary Gland	Pars Distalis	Adenoma	Multiple
Note: ADENOMA TGLs = 4-8			
Note: THE HEAD TILT IN THIS ANIMAL WAS PROBABLY RELATED TO THE			
Note: VERY LARGE PITUITARY ADENOMAS WHICH EXERTED PRESSURE ON			
Note: ON THE BASE OF THE BRAIN.			
Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 125

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Clitoral Gland	Esophagus	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Islets, Pancreatic	Nose	Pancreas	Parathyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Fatty Change TGLS = 7-3 ]			
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 5-1+2			
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-9,4-8			
Ovary		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 8-8			
Salivary Glands		Leukemia Mononuclear	
Skin		Keratoacanthoma	
Note: KERATOACANTHMA TGLs = 2-13			
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 125

**TRT#:** 5

**DOSE:** 0.5% 61LF

**SEX:** Female

**DISP:** Moribund

**DAY ON TEST:** 731

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

[ Leukemia Mononuclear TGLS = 6-3+3.1 ]

Stomach	Forestomach	Leukemia Mononuclear	
	Glandular	Leukemia Mononuclear	
Thymus		Leukemia Mononuclear	
Thyroid Gland	C Cell	Hyperplasia	Mild

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 126

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 710

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Clitoral Gland		Adenoma	
Note: ADENOMA TGLs = 2-13			
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 3-10.1			
Pituitary Gland	Pars Distalis	Cyst	
Note: CYST TGLs = 10-8			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 7-3			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 127

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	Multiple
Note: FIBROADENOMA	TGLs = 3-13,4-14		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	
Note: ADENOMA	TGLs = 8-8		
Spleen		Hematopoietic Cell Proliferation	Mild
Uterus		Sarcoma Stromal	
Note: POSSIBILITY OF A DECIDUAL REACTION HAS TO BE CONSIDERED			
Note: SARC STROMAL	TGLs = 6-6.1		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 129

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Fibroadenoma	
Mammary Gland [ Fibroadenoma TGLS = 2-13 ]			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 131

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 612

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Clitoral Gland	Esophagus
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Jejunum	Islets, Pancreatic	Pancreas	Salivary Glands
Skin	Trachea	Uterus	

MISSING

Adrenal Gland - Medulla	Intestine Small - Ileum	Parathyroid Gland	Thymus
Urinary Bladder			

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
Brain		Hemorrhage	Minimal
Eye	Retina	Atrophy	Marked
	Lens	Cataract	Marked
		Inflammation	Acute, Marked
Note: INFLAMMATION	TGLs = 2-13		
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
Liver		Fatty Change	Diffuse, Marked
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-3		
Note: FATTY CHANGE	TGLs = 5-3		
Lung		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 3-14		
Nose		Inflammation	Acute, Minimal
Ovary		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:46  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

**ANIMAL ID:** 131

**TRT#:** 5  
**DOSE:** 0.5% 61LF

**SEX:** Female  
**DISP:** Moribund

**DAY ON TEST:** 612  
**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

Spleen		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-3		
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild
	Forestomach	Leukemia Mononuclear	
	Glandular	Leukemia Mononuclear	
	Forestomach	Ulcer	Minimal
Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 132

TRT#: 5

SEX: Female

DAY ON TEST: 713

DOSE: 0.5% 61LF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	Multiple
		Galactocele	
Note: FIBROADENOMA	TGLs = 4-13,5-14		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 6-8,7-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 134

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Skin  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Kidney  
Pancreas  
Stomach - Forestomach  
Urinary Bladder

Bone  
Heart  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Stomach - Glandular  
Uterus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Salivary Glands  
Thyroid Gland

MISSING

Clitoral Gland

Intestine Large - Colon

Ovary

Thymus

OBSERVATIONS

Liver  
  
Lung  
Mammary Gland  
Note: FIBROADENOMA TGLs = 2-13  
Pituitary Gland

Bile Duct  
  
  
Pars Distalis  
Pars Distalis  
Pars Distalis

Basophilic Focus  
Hyperplasia  
Inflammation  
Infiltration Cellular  
Fibroadenoma  
  
Adenoma  
Angiectasis  
Hyperplasia

Minimal  
Granulomatous, Minimal  
Histiocyte, Minimal  
  
Mild  
Mild

Note: ADENOMA TGLs = 4-8  
Spleen  
Uterus

Pigmentation

Moderate

Note: MUCIFIED EPITHELIUM LINING CERVIX

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 135

TRT#: 5

DOSE: 0.5% 61LF

SEX: Female

DISP: Moribund

DAY ON TEST: 666

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Carcinoma	Metastatic (Ovary)
		Necrosis	Mild
		Thrombosis	Moderate
Note: CARCINOMA TGLs = 7-3			
Note: THROMBUS TGLs = 9-3			
Lymph Node	Mediastinal	Carcinoma	Metastatic (Ovary)
Mammary Gland		Fibroadenoma	
[ Fibroadenoma TGLS = 1-13 ]			
Mesentery		Carcinoma	Metastatic (Ovary)
Note: CARCINOMA TGLs = 2-8.1,3-8.2			
Ovary		Carcinoma	
Note: POSSIBLE GRANULOSA CELL TUMOR.			
Note: CARCINOMA TGLs = 5-6.1			
Note: OVARIAN TISSUE NOT DISCERNIBLE IN THE MASS.			
Note: CONSIDERED.			
Note: POSSIBILITY OF HEMOPOIETIC NEOPLASM TO BE			
Pancreas			
Note: TUMOR TISSUE ATTACHED TO PANCREAS IN SLIDE #7.			
Pituitary Gland	Pars Distalis	Adenoma	Multiple

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:46  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 135	<b>TRT#:</b> 5 <b>DOSE:</b> 0.5% 61LF	<b>SEX:</b> Female <b>DISP:</b> Moribund	<b>DAY ON TEST:</b> 666 <b>HISTO:</b>
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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Angiectasis TGLS = 8-8 ]	Pars Distalis	Angiectasis	Mild
Spleen		Hematopoietic Cell Proliferation	Moderate
Stomach	Forestomach	Ulcer	Mild

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PRIMARY CAUSE OF DEATH -

---

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 136

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

**MISSING**

Mammary Gland

**OBSERVATIONS**

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Clear Cell Focus  
Hyperplasia  
Adenoma  
Angiectasis

Moderate  
Mild  
  
Mild  
Moderate

Pituitary Gland

Bile Duct  
Pars Distalis  
Pars Distalis

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Mild

Note: ANGIECTASIS TGLs = 5-8

Spleen

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 137

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Intestine Small - Jejunum	Mammary Gland
Parathyroid Gland			

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
Lung		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 7-8		
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	C Cell	Adenoma	
Note: ADENOMA	TGLs = 2-8		
Uterus		Polyp Stromal	
Note: POLYP STROMAL	TGLs = 5-6.1		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 139

TRT#: 5

SEX: Female

DAY ON TEST: 734

DOSE: 0.5% 61LF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Ovary  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Parathyroid Gland  
Stomach - Glandular

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Salivary Glands  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Skin  
Trachea

**MISSING**

Nose

Pituitary Gland

Thymus

**OBSERVATIONS**

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Inflammation  
Infiltration Cellular  
Fibroadenoma

Mild  
Mild  
Granulomatous, Minimal  
Histiocyte, Minimal

Lung  
Mammary Gland  
Note: FIBROADENOMA TGLs = 3-13

Pancreas Acinus

Spleen  
Uterus  
Note: POLYP STROMAL TGLs = 5-6.1

Adenoma  
Hematopoietic Cell Proliferation  
Polyp Stromal  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 141

TRT#: 6

SEX: Female

DAY ON TEST: 716

DOSE: 1.0% 61HF

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thymus  
Uterus

Bone  
Esophagus  
Islets, Pancreatic  
Lymph Node - Mesenteric  
Pancreas  
Spleen  
Thyroid Gland

Bone Marrow  
Intestine Large - Colon  
Kidney  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

AUTO PRECLUDES DIAG.

Intestine Large - Cecum

Intestine Small - Duodenum

Intestine Small - Jejunum

OBSERVATIONS

Heart  
Liver  
Pituitary Gland

Bile Duct  
Pars Distalis  
Pars Distalis

Cardiomyopathy  
Hyperplasia  
Adenoma  
Angiectasis

Mild  
Mild  
Mild

Note: ADENOMA TGLs = 6-8

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 142

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Mild
Note: INCREASED CELLULARITY IN THE VALVES			
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Fibroadenoma	
Mammary Gland			
Note: FIBROADENOMA TGLs = 3-14			
Nose		Inflammation	Acute, Minimal
Pituitary Gland		Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal
Uterus		Polyp Stromal	
Note: POLYP STROMAL TGLs = 6-6			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 143

TRT#: 6

SEX: Female

DAY ON TEST: 545

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Skin

Bone  
Intestine Small - Ileum  
Thyroid Gland

Bone Marrow  
Intestine Small - Jejunum

Clitoral Gland  
Nose

MISSING

Islets, Pancreatic

Parathyroid Gland

INSUFFICIENT TISSUE

Eye

OBSERVATIONS

Adrenal Gland  
Brain  
Heart  
Intestine Large

Medulla

Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Intestine Small

Cecum  
Colon  
Rectum  
Duodenum

Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Kidney

Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 8-4

Liver

Fatty Change  
Leukemia Mononuclear

Diffuse, Marked

Note: LEUKEMIA MONUC TGLs = 9-3

Note: FATTY CHANGE TGLs = 9-3

Lung

Infiltration Cellular  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Histiocyte, Minimal

Lymph Node

Mandibular  
Mediastinal  
Mesenteric

Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Note: LEUKEMIA MONUC TGLs = 7-8.1

Mammary Gland

Acinus

Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear

Moderate

Mesentery

Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 143

TRT#: 6

SEX: Female

DAY ON TEST: 545

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

Ovary			Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4-6			
Pancreas			Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 5-9			
Pituitary Gland		Pars Distalis	Cyst	Minimal
		Pars Distalis	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 10-8			
Salivary Glands			Leukemia Mononuclear	
Skeletal Muscle			Leukemia Mononuclear	
Spleen			Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 6-3			
Stomach		Forestomach	Leukemia Mononuclear	
		Glandular	Leukemia Mononuclear	
Thymus			Leukemia Mononuclear	
Trachea			Leukemia Mononuclear	
Urinary Bladder			Leukemia Mononuclear	
Uterus			Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 144

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Moribund

DAY ON TEST: 672

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	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	Lymph Node - Mesenteric	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Eye	Lens	Cataract	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
		Inflammation	Granulomatous, Mild
[ Hepatodiaphragmatic Nodule TGLS = 5-3.1 ]			
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 3-14+14.1			
Pituitary Gland	Pars Distalis	Cyst	
	Pars Distalis	Hyperplasia	Mild
Spleen			
Note: CONGESTED			
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 146

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Salivary Glands  
Thyroid Gland

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Skin  
Trachea

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Mesentery  
Parathyroid Gland  
Stomach - Forestomach  
Urinary Bladder

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lung  
Nose  
Pituitary Gland  
Stomach - Glandular

**MISSING**

Thymus

**OBSERVATIONS**

Kidney  
Liver

Nephropathy  
Basophilic Focus  
Hepatodiaphragmatic Nodule

Mild

Note: ANOM HEPAT LOB TGLs = 7-3.1

Mammary Gland

Note: FIBROADENOMA TGLs = 3-13

Fibroadenoma

Spleen

Hematopoietic Cell Proliferation

Mild

Uterus

Polyp Stromal

Note: POLYP STROMAL TGLs = 9-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 147

TRT#: 6

SEX: Female

DAY ON TEST: 650

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Harderian Gland	Heart
Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Ovary	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Clitoral Gland	Intestine Large - Colon	Islets, Pancreatic	Pancreas
Thymus			

OBSERVATIONS

Eye	Lens	Cataract	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Fatty Change	Focal, Mild
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Moderate
		Mixed Cell Focus	
Note: ANOM HEPAT LOB TGLs = 6-3.1			
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA TGLs = 2-14,4-14			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 7-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 148

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Moribund

DAY ON TEST: 531

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum
Islets, Pancreatic	Nose	Parathyroid Gland	Salivary Glands
Stomach - Forestomach	Stomach - Glandular	Trachea	Urinary Bladder
Uterus			

MISSING

Lymph Node - Mandibular

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Brain		Hemorrhage	Mild
		Leukemia Mononuclear	
Clitoral Gland		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Intestine Small	Ileum	Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Fatty Change	Focal, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 7-3			
Lung	Alveolar Epith	Hyperplasia	Minimal
		Infiltration Cellular	Histiocyte, Minimal
		Leukemia Mononuclear	
		Leukemia Mononuclear	
Lymph Node	Mesenteric		
Note: LEUKEMIA MONUC TGLs = 6-8			
Mammary Gland	Acinus	Hyperplasia	Minimal
Ovary		Leukemia Mononuclear	
Pancreas		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Cyst	Minimal
	Pars Distalis	Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 148

**TRT#:** 6

**DOSE:** 1.0% 61HF

**SEX:** Female

**DISP:** Moribund

**DAY ON TEST:** 531

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Skin

Leukemia Mononuclear

Spinal Cord

Hemorrhage

Mild

Leukemia Mononuclear

Note: FOCAL HEMORRHAGES WERE OBSERVED IN THE WHITE MATTER OF THE

Note: TO BE CERTAIN THIS IS AN ANTEMORTEM EVENT.

Note: SPINAL CORD; HOWEVER, TISSUE ARTEFACTS MAKE IT DIFFICULT

Spleen

Leukemia Mononuclear

[ Leukemia Mononuclear TGLS = 5-3.1 ]

Thymus

Leukemia Mononuclear

Thyroid Gland

C Cell

Adenoma

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 149

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Harderian Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Skin  
Thyroid Gland

Adrenal Gland - Medulla  
Clitoral Gland  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Stomach - Forestomach  
Trachea

Bone  
Esophagus  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Eye  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Salivary Glands  
Thymus

MISSING

Parathyroid Gland

OBSERVATIONS

Kidney  
Liver

Nephropathy  
Basophilic Focus  
Hyperplasia

Mild

Bile Duct

Minimal

Note: SUGGESTION OF TRANSFORMATION IN THE SECTION CIRCLED

Nose  
Pituitary Gland

Inflammation  
Adenoma  
Angiectasis

Acute, Minimal

Pars Distalis  
Pars Distalis

Moderate

Note: ADENOMA TGLs = 6-8

Spleen

Hematopoietic Cell Proliferation  
Pigmentation  
Polyp Stromal

Moderate

Mild

Uterus

Note: ACELLULAR NECROTIC MASS

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 151

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Eye	Harderian Gland
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	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder	Uterus		

OBSERVATIONS

Clitoral Gland		Carcinoma	
Note: CARCINOMA	TGLs = 4-10.1		
Heart		Cardiomyopathy	Mild
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
[ Infiltration Cellular TGLS = 6-1+2 ]			
Lymph Node	Mesenteric	Degeneration	Cystic, Moderate
Note: DEGEN	TGLs = 7-14		
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA	TGLs = 3-15		
Pituitary Gland	Pars Distalis	Cyst	
	Pars Distalis	Hyperplasia	Mild
Note: CYST	TGLs = 8-8		
Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 152

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland	Thymus
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Mixed Cell Focus	
Note: MIXED CL FOCUS TGLs = 8-3.1			
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-13+13.1			
Pituitary Gland	Pars Distalis	Adenoma	Multiple
Note: ADENOMA TGLs = 7-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Note: PIGMENT TGLs = 4-3			
Urin Bladder			
Note: GROWTH IN BLADDER OR PITUITARY TISSUE			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 153

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland	Intestine Large - Colon
----------------	-------------------------

OBSERVATIONS

Eye Note: CATARACT TGLs = 2-13	Lens	Cataract	Mild
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Basophilic Focus Hyperplasia Inflammation Fibroadenoma	Minimal Granulomatous, Minimal
Mammary Gland Note: FIBROADENOMA TGLs = 3-14			
Pituitary Gland Note: ADENOMA TGLs = 5-8	Pars Distalis Pars Distalis	Adenoma Angiectasis	Mild
Spleen		Hematopoietic Cell Proliferation Pigmentation	Mild Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 155

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Uterus

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Trachea

Bone Marrow  
Heart  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Urinary Bladder

MISSING

Intestine Large - Rectum

OBSERVATIONS

Kidney  
Liver  
  
Mammary Gland  
Note: GALACTOCELE TGLs = 2-13  
Pituitary Gland  
  
Note: ADENOMA TGLs = 3-8  
Spleen  
Thyroid Gland

Bile Duct  
  
Pars Distalis  
Pars Distalis  
  
C Cell

Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Galactocele  
  
Adenoma  
Angiectasis  
  
Pigmentation  
Adenoma

Minimal  
  
Moderate  
Granulomatous, Minimal  
  
Mild  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 156

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Nose

OBSERVATIONS

Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
Lung		Infiltration Cellular	Histiocyte, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 3-5		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	Bilateral, C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 157

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Moribund

DAY ON TEST: 643

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Bone Marrow	Parathyroid Gland
-------------	-------------------

OBSERVATIONS

Heart	Cardiomyopathy	Mild	
Kidney	Nephropathy	Mild	
Liver	Leukemia Mononuclear		
Note: LEUKEMIA MONUC TGLs = 5-3			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ADENOMA TGLs = 6-8			
Spleen	Leukemia Mononuclear		
	Pigmentation	Moderate	
Note: PIGMENT TGLs = 3-3			
Uterus	Polyp Stromal		

PRIMARY CAUSE OF DEATH -

Animal Note: LEUKEMIA OR LEUKEMOID REACTION

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 159

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

OBSERVATIONS

Ear  
Note: PAPILLOMA SQUA TGLs = 2-13

Kidney  
Liver

Bile Duct

Mammary Gland  
Note: FIBROADENOMA TGLs = 3-10.1,4-10.2,5-10

Pituitary Gland  
Note: CYST TGLs = 7-8 Pars Distalis

Spleen

Stomach  
Note: A FEW DISTENDED GLANDS

Squamous Cell Papilloma

Nephropathy  
Basophilic Focus  
Hyperplasia  
Fibroadenoma

Minimal  
Mild  
Multiple

Cyst

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 160

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Inflammation	Granulomatous, Mild
Mammary Gland		Adenoma	
Note: ADENOMA	TGLs = 2-13		
Pituitary Gland		Adenoma	
		Angiectasis	Mild
Note: ADENOMA	TGLs = 4-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland		Hyperplasia	Mild
Uterus	C Cell	Polyp Stromal	
Note: POLYP STROMAL	TGLs = 3-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 163

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Ovary  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

**OBSERVATIONS**

Heart  
Kidney  
Liver  
  
Lung  
Lymph Node  
Note: LEUKEMIA MONUC TGLs = 3-8  
Spleen

Bile Duct  
  
Alveolar Epith  
Mesenteric

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Leukemia Mononuclear  
Hyperplasia  
Leukemia Mononuclear  
  
Leukemia Mononuclear  
Pigmentation

Mild  
Minimal  
  
Mild  
Granulomatous, Minimal  
  
Mild  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 165

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Moribund

DAY ON TEST: 557

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Skin  
Thymus  
Uterus

Adrenal Gland - Medulla  
Ear  
Intestine Large - Rectum  
Islets, Pancreatic  
Ovary  
Spleen  
Thyroid Gland

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Pancreas  
Stomach - Forestomach  
Trachea

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

MISSING

Parathyroid Gland

OBSERVATIONS

Brain  
Note: ADENOMA.  
Note: BRAIN PROBABLY RELATED TO THE LARGE PITUITARY  
Note: HEMORRHAGE TGLs = 5-5  
Note: THE DEFORMITY AND HEMORRHAGE AT THE BASE OF THE  
Heart  
Kidney  
Liver  
Lymph Node  
Mammary Gland  
Pituitary Gland  
Note: ADENOMA TGLs = 4-8.1+13  
Note: THE HEAD TILT OBSERVED IN THIS ANIMAL WAS PROBABLY  
Note: RELATED TO THE LARGE PITUITARY ADENOMA.

Hemorrhage Moderate  
Cardiomyopathy Minimal  
Nephropathy Mild  
Basophilic Focus Minimal  
Hyperplasia Minimal  
Inflammation Granulomatous, Mild  
Infiltration Cellular Histiocyte, Mild  
Galactocele Moderate  
Hyperplasia Moderate  
Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 166

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland

OBSERVATIONS

Eye	Lens	Cataract	Moderate
Note: CATARACT TGLs = 2-14			
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Inflammation	Granulomatous, Minimal
Note: ANOM HEPAT LOB TGLs = 6-3			
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 3-13			
Nose			
Note: BLOOD IN NASAL CAVITY			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Pigmentation	Moderate
Thyroid Gland	C Cell	Hyperplasia	Minimal
Uterus			
Note: DISTENDED GLANDS.			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 167

TRT#: 6

SEX: Female

DAY ON TEST: 632

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Mesentery  
Parathyroid Gland  
Thymus

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Liver  
Nose  
Salivary Glands  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Stomach - Forestomach  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland  
Note: ADENOMA TGLs = 8-8  
Kidney  
Lung  
Pituitary Gland  
Skin  
Note: FIBROMA TGLs = 2-14+14.1  
Spleen  
Note: HEMA CELL PROL TGLs = 5-3  
Uterus

Cortex  
Cortex  
Pars Distalis  
Pars Intermed  
Subcut Tiss

Adenoma  
Hyperplasia  
Nephropathy  
Infiltration Cellular  
Cyst  
Cyst  
Fibroma  
Hematopoietic Cell Proliferation  
Polyp Stromal

Minimal  
Minimal  
Histiocyte, Minimal  
Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 168

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Uterus

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Salivary Glands  
Thyroid Gland

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Urinary Bladder

MISSING

Nose

Pituitary Gland

Thymus

OBSERVATIONS

Heart  
Kidney  
Liver

Bile Duct

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Mixed Cell Focus

Mild  
Minimal  
Mild  
Granulomatous, Minimal

Note: MIXED CL FOCUS TGLs = 6-3,9-3

Spleen

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 169

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Ovary  
Skin  
Thyroid Gland

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

OBSERVATIONS

Heart  
Kidney  
Liver

Bile Duct

Mammary Gland

Note: FIBROADENOMA TGLs = 2-13

Pituitary Gland

Pars Distalis  
Pars Distalis

Note: ADENOMA TGLs = 4-8

Spleen

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Thrombosis  
Fibroadenoma  
Galactocele

Adenoma  
Angiectasis

Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Minimal  
Mild  
Granulomatous, Moderate

Moderate

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 170

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Glandular  
Uterus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Salivary Glands  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thyroid Gland

OBSERVATIONS

Heart  
Kidney  
Liver  
  
Pituitary Gland  
  
Note: ADENOMA TGLs = 6-8  
Spleen  
  
Urinary Bladder

Bile Duct  
  
Pars Distalis  
Pars Distalis  
  
Transit Epithe

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Adenoma  
Angiectasis  
  
Hematopoietic Cell Proliferation  
Pigmentation  
Hyperplasia  
Inflammation

Mild  
Mild  
  
Mild  
Granulomatous, Minimal  
  
Moderate  
  
Mild  
Mild  
Mild  
Chronic Active, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 171

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Moribund

DAY ON TEST: 722

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Adrenal Gland - Medulla

OBSERVATIONS

Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Minimal
Note: SUGGESTIVE OF NECROSIS IN #4.1			
Liver		Fatty Change	Diffuse, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[ Fatty Change TGLS = 7-3 ]			
Lung		Leukemia Mononuclear	
Lymph Node	Axillary	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 2-9,3-2.1,6-8.1			
Ovary		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-3+3.1 ]			
Thymus		Leukemia Mononuclear	
Uterus			

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 171

**TRT#:** 6

**DOSE:** 1.0% 61HF

**SEX:** Female

**DISP:** Moribund

**DAY ON TEST:** 722

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

Note: THE CERVIX WAS REPORTED AS ENLARGED, BUT WAS

Note: HISTOLOGICALLY NORMAL.

Note: CERVIX LINED BY MUCINOUS EPITHELIUM.

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 172

TRT#: 6

SEX: Female

DAY ON TEST: 686

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Mammary Gland
Nose	Ovary	Pancreas	Parathyroid Gland
Salivary Glands	Skin	Stomach - Glandular	Trachea
Urinary Bladder	Uterus		

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Islets, Pancreatic		Adenoma	
Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
Liver		Fatty Change	Diffuse, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: A SMALL PSEUDONODULE IN THE SECTION CIRCLED			
Note: PROBABLE HYPERPLASIA.			
Note: LEUKEMIA MONUC TGLs = 6-3			
Lung		Leukemia Mononuclear	
		[ Leukemia Mononuclear TGLs = 2-1+2 ]	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC TGLs = 3-2.1,5-9			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01  
**Test Type:** CHRONIC  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** HC yellow 4  
**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 21:01:46  
**First Dose M/F:** NA / NA  
**Lab:** TSI MASON

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<b>ANIMAL ID:</b> 172	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 686
	<b>DOSE:</b> 1.0% 61HF	<b>DISP:</b> Moribund	<b>HISTO:</b>

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: ADENOMA	TGLs = 9-8		
Note: HYPERPLASIA	TGLs = 8-8		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 4-3.1 ]			
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild
	Forestomach	Ulcer	Mild
Note: ULCER	TGLs = 10-7		
Thymus		Leukemia Mononuclear	
Thyroid Gland	C Cell	Adenoma	

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PRIMARY CAUSE OF DEATH -

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 175

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Thymus  
Uterus

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

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

OBSERVATIONS

Heart  
Kidney  
Liver  
    Note: BASOPH FOCUS   TGLs = 6-3  
Lung  
Mammary Gland  
    Note: FIBROADENOMA   TGLs = 1-13,3-13  
Pituitary Gland  
    Note: ADENOMA        TGLs = 4-8  
Spleen

Pars Distalis

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
  
Infiltration Cellular  
Fibroadenoma  
  
Adenoma  
  
Pigmentation

Mild  
Minimal  
  
Histiocyte, Minimal  
  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 176

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Moribund

DAY ON TEST: 692

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus Inflammation	Granulomatous, Minimal
Note: BASOPH FOCUS TGLs = 8-3			
Pituitary Gland	Pars Distalis Pars Distalis	Adenoma Angiectasis	Mild
Note: ADENOMA TGLs = 11-8			
Spleen		Hematopoietic Cell Proliferation	Moderate
Note: HEMA CELL PROL TGLs = 5-3			
Zymbal's Gland		Carcinoma	
Note: CARCINOMA TGLs = 10-13+13.1			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 177

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 2-13			
Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
Note: HYPERPLASIA TGLs = 3-8			
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 178

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland	Lymph Node - Mandibular
----------------	-------------------------

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild

Note: ADENOMA TGLs = 2-8

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 179

TRT#: 6

SEX: Female

DAY ON TEST: 731

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Pancreas  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Small - Duodenum  
Lung  
Mesentery  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Nose  
Salivary Glands  
Thymus  
Uterus

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Ovary  
Skin  
Thyroid Gland

OBSERVATIONS

Clitoral Gland  
Note: ADENOMA TGLs = 2-10  
Heart  
Kidney  
Liver  
Pituitary Gland  
Pars Distalis  
Pars Distalis  
Pars Distalis  
Note: ADENOMA TGLs = 6-8  
Spleen

Bile Duct  
Pars Distalis  
Pars Distalis  
Pars Distalis

Adenoma  
Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Adenoma  
Angiectasis  
Hyperplasia  
Hematopoietic Cell Proliferation  
Pigmentation  
Mild  
Minimal  
Mild  
Mild  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 180

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 731

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Salivary Glands  
Thymus

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Nose  
Skin  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Stomach - Forestomach  
Urinary Bladder

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Glandular

OBSERVATIONS

Adrenal Gland  
Heart  
Kidney  
Liver  
  
Ovary  
Pituitary Gland  
  
Note: ADENOMA TGLs = 5-8  
Spleen  
  
Thyroid Gland  
Note: ADENOMA TGLs = 2-8  
Uterus  
Note: POLYP STROMAL TGLs = 3-6  
Note: BLOODY NECROTIC MASS

Medulla  
  
Bile Duct  
  
Pars Distalis  
Pars Distalis  
  
C Cell

Hyperplasia  
Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Cyst  
Adenoma  
Angiectasis  
  
Hematopoietic Cell Proliferation  
Pigmentation  
Adenoma  
  
Polyp Stromal

Minimal  
Mild  
Minimal  
  
Mild  
  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 181

TRT#: 6

SEX: Female

DAY ON TEST: 730

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**OBSERVATIONS**

Kidney		Nephropathy	Minimal
Liver		Inflammation	Granulomatous, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 3-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal
Uterus		Polyp Stromal	
Note: POLYP STROMAL	TGLs = 2-6		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 182

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Harderian Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Heart  
Intestine Small - Duodenum  
Lung  
Ovary  
Salivary Glands  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Thyroid Gland

Bone Marrow  
Eye  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

**MISSING**

Mammary Gland

**OBSERVATIONS**

Kidney  
Liver

Nephropathy  
Basophilic Focus  
Hepatodiaphragmatic Nodule  
Hyperplasia

Minimal

Bile Duct

Mild

Note: ANOM HEPAT LOB TGLs = 4-3.1

Spleen

Hematopoietic Cell Proliferation  
Pigmentation

Mild

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 184

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Thymus

OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Note: NEPHROPATHY	TGLs = 5-4		
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
Note: ANOM HEPAT LOB	TGLs = 3-3.1,4-3.1		
Lymph Node	Mediastinal	Infiltration Cellular	Histiocyte, Mild
Mammary Gland		Fibroadenoma	
		Galactocele	
[ Galactocele TGLS = 2-13 ]			
Pituitary Gland	Pars Distalis	Hyperplasia	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 185

TRT#: 6

SEX: Female

DAY ON TEST: 710

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Heart  
Intestine Small - Duodenum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Ovary  
Skin  
Thymus  
Uterus

Bone  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pancreas  
Spinal Cord  
Thyroid Gland

Bone Marrow  
Harderian Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Mammary Gland  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

OBSERVATIONS

Eye  
Kidney  
Liver  
  
Pituitary Gland  
  
Note: ADENOMA TGLs = 3-8  
Spleen

Lens  
  
Pars Distalis  
Pars Distalis

Cataract  
Nephropathy  
Basophilic Focus  
Eosinophilic Focus  
Inflammation  
Adenoma  
Angiectasis  
  
Hematopoietic Cell Proliferation  
Pigmentation

Mild  
Minimal  
  
Granulomatous, Minimal  
Moderate  
  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 186

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Salivary Glands  
Thymus

Adrenal Gland - Medulla  
Clitoral Gland  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Skin  
Thyroid Gland

Bone  
Esophagus  
Intestine Small - Duodenum  
Lung  
Pancreas  
Stomach - Forestomach  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Parathyroid Gland  
Stomach - Glandular  
Urinary Bladder

OBSERVATIONS

Heart  
Kidney  
Liver

Cardiomyopathy  
Nephropathy  
Basophilic Focus  
Hyperplasia  
Inflammation  
Mixed Cell Focus

Mild  
Minimal  
Mild  
Granulomatous, Mild

Bile Duct

Infiltration Cellular  
Fibroadenoma  
Galactocele

Histiocyte, Mild

Note: BASOPH FOCUS TGLs = 6-3

Lymph Node  
Mammary Gland

Mediastinal

Note: FIBROADENOMA TGLs = 2-14

Ovary  
Pituitary Gland

Pars Distalis

Cyst  
Adenoma

Note: ADENOMA TGLs = 9-8

Spleen

Infiltration Cellular  
Pigmentation

Histiocyte, Moderate  
Mild

Note: INFILTRAT CELL TGLs = 5-3.1

Note: MULTIPLE NODULES OF HISTIOCYTES

Uterus

Polyp Stromal

Note: POLYP STROMAL TGLs = 3-6

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 187

TRT#: 6

SEX: Female

DAY ON TEST: 715

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Clitoral Gland

OBSERVATIONS

Kidney		Nephropathy	Moderate
Liver		Basophilic Focus	
		Fatty Change	Focal, Moderate
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
Lung		Alveolar/Bronchiolar Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 2-8		
Spleen		Hematopoietic Cell Proliferation	Mild
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Moderate
	Forestomach	Squamous Cell Papilloma	
Note: ACANTHOSIS	TGLs = 3-7		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 189

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	Eye
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
Lymph Node - Mesenteric	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Trachea	Urinary Bladder
Uterus			

**OBSERVATIONS**

Liver		Basophilic Focus	
		Inflammation	Granulomatous, Minimal
Mammary Gland		Fibroadenoma	Multiple
		Galactocele	
Note: FIBROADENOMA	TGLs = 3-14,4-15		
Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	
	Pars Distalis	Hyperplasia	Minimal
Note: CYST	TGLs = 5-8		
Spleen		Hematopoietic Cell Proliferation	Mild
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 190

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 730

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Intestine Large - Colon

OBSERVATIONS

Clitoral Gland		Adenoma	
Note: ADENOMA	TGLs = 7-10		
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
		Mixed Cell Focus	
Note: MIXED CL FOCUS	TGLs = 6-3.1		
Mammary Gland		Fibroadenoma	
		Galactocele	
Note: FIBROADENOMA	TGLs = 2-13		
Ovary		Cyst	
Note: CYST	TGLs = 3-6		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ADENOMA	TGLs = 5-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 190

**TRT#:** 6

**DOSE:** 1.0% 61HF

**SEX:** Female

**DISP:** Terminal Sacrifice

**DAY ON TEST:** 730

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 192

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Esophagus	Eye	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	Lymph Node - Mesenteric	Nose
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

MISSING

Mammary Gland	Skin
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OBSERVATIONS

Clitoral Gland		Carcinoma	
[ Carcinoma TGLS = 3-10 ]			
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Mild
[ Hyperplasia TGLS = 4-3 ]			
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 193

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	Harderian Gland
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Kidney
Mammary Gland	Nose	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder	Uterus	

OBSERVATIONS

Eye	Lens	Cataract	Mild
Note: CATARACT	TGLs = 1-13		
Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 8-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-9,6-8		
Ovary		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 9-6		
Pancreas		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Hyperplasia	Mild
Note: ANGIECTASIS	TGLs = 5-8		
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear	TGLs = 4-3.1 ]		
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 194

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
		Mixed Cell Focus	
Nose		Inflammation	Acute, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA	TGLs = 2-8		
Spleen		Pigmentation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 195

TRT#: 6

SEX: Female

DAY ON TEST: 729

DOSE: 1.0% 61HF

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Parathyroid Gland	Thymus
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OBSERVATIONS

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
Mammary Gland			
Note: LARGE MASS OF ADIPOSE TISSUE ADJACENT TO MAMMARY GLAND.			
Pituitary Gland	Pars Distalis	Cyst	
Note: CYST	TGLs = 6-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Adenoma	
Note: ADENOMA	TGLs = 8-8		
Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 196

TRT#: 6

SEX: Female

DAY ON TEST: 497

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Clitoral Gland	Esophagus
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic	Lymph Node - Mandibular
Nose	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Glandular	Thymus	Trachea
Urinary Bladder	Uterus		

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
Kidney		Nephropathy	Minimal
Liver		Fatty Change	Diffuse, Marked
		Leukemia Mononuclear	
Note: FATTY CHANGE	TGLs = 10-3		
Note: LEUKEMIA MONUC	TGLs = 11-3		
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-8		
Mammary Gland	Acinus	Hyperplasia	Mild
Ovary		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Angiectasis	Mild
	Pars Distalis	Cyst	Minimal
Spleen		Leukemia Mononuclear	
[ Leukemia Mononuclear TGLS = 6-3.1 ]			
Stomach	Forestomach	Acanthosis	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 198

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Clitoral Gland
Esophagus	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Islets, Pancreatic
Mammary Gland	Nose	Ovary	Pancreas
Parathyroid Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Trachea	Urinary Bladder	Uterus

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Leukemia Mononuclear	
Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 7-3		
Lung		Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 4		
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: LEUKEMIA MONUC	TGLs = 3-2		
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Mild
Note: ANGIECTASIS	TGLs = 8-8		
Spleen		Leukemia Mononuclear	
	[ Leukemia Mononuclear TGLS = 6-3.1+3.2 ]		
Thymus		Leukemia Mononuclear	
Thyroid Gland	Follicular Cel	Adenoma	
Note: ADENOMA	TGLs = 2-8		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 198

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 729

**DOSE:** 1.0% 61HF

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

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Animal Note: MORE LIKE LYMPHOCYTIC LEUKEMIA

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 199

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Eye	Lens	Cataract	Mild
Note: CATARACT TGLs = 2-15		Hemorrhage	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
Lung		Infiltration Cellular	Histiocyte, Minimal
Mammary Gland		Fibroadenoma	
Note: FIBROADENOMA TGLs = 3-14			
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 5-8	Pars Distalis	Angiectasis	Mild
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Stomach	Forestomach	Acanthosis	Mild
Note: ACANTHOSIS TGLs = 6-7			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 200

TRT#: 6

SEX: Female

DAY ON TEST: 632

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Lymph Node - Mesenteric	Thymus
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**OBSERVATIONS**

Liver		Basophilic Focus	Minimal
	Bile Duct	Hyperplasia	Minimal
		Inflammation	Granulomatous, Mild
Mammary Gland	Acinus	Hyperplasia	Moderate
Pituitary Gland	Pars Distalis	Adenoma	
Note: ADENOMA TGLs = 7-8			
Thyroid Gland	C Cell	Hyperplasia	Minimal
Uterus	Endometrium	Hyperplasia	Mild
		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 201

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Clitoral Gland  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Islets, Pancreatic  
Nose  
Pituitary Gland  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Lung  
Ovary  
Salivary Glands  
Thymus  
Uterus

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Pancreas  
Skin  
Thyroid Gland

OBSERVATIONS

Bone  
Note: POSSIBILITY OF OSTEOPETROSIS TO BE CONSIDERED  
Note: HYPEROSTOSIS TGLs = 7-11+12+15

Hyperostosis Moderate

Harderian Gland  
Note: ADENOMA TGLs = 1-14

Adenoma

Heart  
Kidney  
Liver

Cardiomyopathy Mild  
Nephropathy Mild  
Basophilic Focus  
Eosinophilic Focus  
Hepatodiaphragmatic Nodule  
Hyperplasia Mild

Bile Duct

Note: ANOM HEPAT LOB TGLs = 4-3  
Note: [ EOSIN FOCUS ] TGLs = 5-3

Mammary Gland  
Note: ADENOMA TGLs = 3-13

Adenoma

Spleen

Hematopoietic Cell Proliferation Mild  
Pigmentation Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 205

TRT#: 6

DOSE: 1.0% 61HF

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 729

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		Mixed Cell Focus	
Note: ANOM HEPAT LOB TGLs = 2-3			
Note: LEUKEMIA MONUC TGLs = 3-3			
Lung	Alveolar Epith	Alveolar/Bronchiolar Adenoma	
		Hyperplasia	Mild
		Leukemia Mononuclear	
Note: ALV BRON ADEN TGLs = 7-1			
Note: MORE LIKE A CARCINOMA			
Mammary Gland		Fibroadenoma	
		Galactocele	
[ Galactocele TGLS = 5-13 ]			
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA TGLs = 6-8			
Spleen		Leukemia Mononuclear	
Uterus		Polyp Stromal	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05057-01

**Test Type:** CHRONIC

**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** HC yellow 4

**CAS Number:** 59820-43-8

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 21:01:46

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

**Lab:** TSI MASON

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**ANIMAL ID:** 205

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 729

**DOSE:** 1.0% 61HF

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Note: POLYP STROMAL TGLs = 4-6

Note: ALSO A BLOODY ACELLULAR MASS

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05057-01

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: HC yellow 4

CAS Number: 59820-43-8

Date Report Requested: 10/19/2014

Time Report Requested: 21:01:46

First Dose M/F: NA / NA

Lab: TSI MASON

ANIMAL ID: 209

TRT#: 6

SEX: Female

DAY ON TEST: 651

DOSE: 1.0% 61HF

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Clitoral Gland	Esophagus	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	Lymph Node - Mesenteric	Mammary Gland
Ovary	Pancreas	Parathyroid Gland	Salivary Glands
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Trachea	Urinary Bladder	Uterus	

OBSERVATIONS

Eye	Lens	Cataract	Mild
Note: CATARACT	TGLs = 1-13		
Kidney		Nephropathy	Mild
Note: NEPHROPATHY	TGLs = 6-4		
Liver		Basophilic Focus	
Nose		Inflammation	Acute, Mild
Pituitary Gland	Pars Distalis	Adenoma	
	Pars Distalis	Angiectasis	Moderate
Note: ADENOMA	TGLs = 8-8		
Spleen		Hematopoietic Cell Proliferation	Mild
		Pigmentation	Mild
Thyroid Gland	C Cell	Hyperplasia	Minimal
Note: HYPERPLASIA	TGLs = 4-8		

PRIMARY CAUSE OF DEATH

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\*\* END OF REPORT \*\*

\* PROTOCOL REQUIRED TISSUE