

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:58  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

<b>C Number:</b>	C55470B
<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>	Male
<b>PWG Approval Date</b>	NONE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 101

TRT#: 2

SEX: Male

DAY ON TEST: 422

DOSE: 10 MG/M3 24 MO

DISP: Missing

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Preputial Gland  
Spleen  
Trachea

Bone  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Seminal Vesicle  
Stomach - Glandular

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Pituitary Gland  
Skeletal Muscle  
Testes

**MISSING**

Harderian Gland  
Parathyroid Gland

Lymph Node - Mandibular  
Thyroid Gland

Lymph Node - Mesenteric

Mammary Gland

**OBSERVATIONS**

Adrenal Gland  
Heart  
Kidney  
Lung  
Thymus  
Tissue NOS

Cortex  
  
Interstitialium

Vacuolization Cytoplasmic  
Cardiomyopathy  
Nephropathy  
Fibrosis  
Thymoma Nos  
Fibroma

Minimal  
Mild  
Mild  
Focal, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 102

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Salivary Glands
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urethra	

**MISSING**

Intestine Large - Colon	Intestine Large - Rectum	Lymph Node - Mesenteric	Mammary Gland
Preputial Gland	Prostate	Skeletal Muscle	

**AUTO PRECLUDES DIAG.**

Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	
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**OBSERVATIONS**

Adrenal Gland	Cortex	Degeneration	Cystic, Focal, Minimal
Heart		Cardiomyopathy	Moderate
	Atrium	Thrombosis	
Intestine Large	Cecum, Submucosa	Necrosis	Acute, Focal, Mild
Kidney	Epithelium, Papilla, Pelvis	Hyperplasia	Minimal
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Marked
	Periportal	Necrosis	Mild
Lung	Interstitialium	Fibrosis	Minimal
Skin	Hair Follicle	Atrophy	Mild
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 103

TRT#: 2

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	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	Larynx	Lymph Node - Mandibular
Pancreas	Parathyroid Gland	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Bronchial	Lymph Node - Mesenteric
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Minimal
Kidney	Epithelium, Papilla, Pelvis	Hyperplasia	Minimal
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Mammary Gland		Cyst	Mild
Nose		Foreign Body	Mild
		Inflammation	Acute, Mild
	Nasolacrim Dct	Metaplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 104

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 94

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lymph Node

Mesenteric

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 105

TRT#: 2

SEX: Male

DAY ON TEST: 479

DOSE: 10 MG/M3 24 MO

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
Kidney	Lacrimal Gland	Lymph Node - Mandibular	Mammary Gland
Nose	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Trachea
Urinary Bladder			

MISSING

Lymph Node - Bronchial	Lymph Node - Mesenteric	Skeletal Muscle
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Minimal
	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Larynx		Inflammation	Acute, Minimal
		Metaplasia	Squamous, Mild
Liver	Bile Duct	Hyperplasia	Minimal
Lung	Interstitialium	Fibrosis	Focal, Minimal
Pancreas		Fibrosis	Focal, Minimal
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Thyroid Gland	C Cell	Adenoma	
Tissue NOS		Fibrosarcoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 106

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

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
Lacrimal Gland	Lymph Node - Mandibular	Mammary Gland	Nose
Parathyroid Gland	Preputial Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Urinary Bladder		

**MISSING**

Harderian Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mesenteric	Trachea		

**OBSERVATIONS**

Adrenal Gland	Cortex	Adenoma	
	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Bile Stasis	Minimal
	Bile Duct	Hyperplasia	Mild
Pancreas	Acinus	Fibrosis	Focal, Minimal
	Duct	Inflammation	Chronic, Mild
Pituitary Gland		Adenoma	
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 107

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Mandibular	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Seminal Vesicle	Skeletal Muscle
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urethra	Urinary Bladder

**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Lymph Node - Bronchial	Lymph Node - Mesenteric
Mammary Gland			

**OBSERVATIONS**

Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver		Basophilic Focus	
		Degeneration	Cystic, Focal, Mild
	Bile Duct	Hyperplasia	Mild
Lung		Atelectasis	Focal, Mild
Prostate		Inflammation	Acute, Mild
Salivary Glands	Duct	Metaplasia	Squamous, Minimal
Skin		Cyst Epithelial Inclusion	
Testes	Interstit Cell	Adenoma	
Tissue NOS		Fibroma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 108

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Lymph Node - Bronchial	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Urinary Bladder			

MISSING

Esophagus	Harderian Gland	Larynx	Lung
Thymus	Thyroid Gland	Trachea	

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Marked
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Marked
Liver		Basophilic Focus	Mild
	Bile Duct	Hyperplasia	Mild
Mammary Gland		Cyst	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Acanthosis	Mild
	Forestomach	Hyperkeratosis	Mild
	Glandular, Submucosa	Inflammation	Chronic Active, Moderate
	Forestomach	Ulcer	Focal, Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 109

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Intestine Large - Colon  
Lacrimal Gland  
Nose  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Bone  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Salivary Glands  
Stomach - Glandular

Brain  
Intestine Small - Ileum  
Lung  
Parathyroid Gland  
Skeletal Muscle  
Thymus

Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Preputial Gland  
Skin  
Thyroid Gland

**MISSING**

Esophagus  
Spleen

Harderian Gland  
Trachea

Lymph Node - Bronchial

Lymph Node - Mandibular

**OBSERVATIONS**

Adrenal Gland  
Epididymis  
Eye  
Heart  
Islets, Pancreatic  
Kidney  
Liver

Cortex  
Anterior

Hyperplasia  
Hypospermia  
Synechia  
Cardiomyopathy  
Adenoma  
Nephropathy  
Degeneration  
Hepatodiaphragmatic Nodule  
Hyperplasia  
Hyperplasia  
Adenoma

Focal, Mild  
Mild  
Moderate  
Marked  
Cystic, Minimal  
Mild  
Mild

Pituitary Gland  
Testes

Bile Duct  
Interstit Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 110

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 628

**DOSE:** 10 MG/M3 24 MO

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Pituitary Gland  
Spleen  
Thyroid Gland

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Kidney  
Lymph Node - Mandibular  
Preputial Gland  
Stomach - Forestomach  
Trachea

Bone  
Eye  
Intestine Small - Duodenum  
Lacrimal Gland  
Lymph Node - Mesenteric  
Prostate  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Larynx  
Parathyroid Gland  
Skin  
Thymus

**MISSING**

Harderian Gland

Lymph Node - Bronchial

Mammary Gland

Skeletal Muscle

**OBSERVATIONS**

Heart  
Islets, Pancreatic  
Liver  
Nose

Bile Duct  
Septum  
Septum

Cardiomyopathy  
Adenoma  
Hyperplasia  
Inflammation  
Polyp

Mild  
Mild  
Acute, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 111

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Nose	Pancreas	Preputial Gland
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus		

MISSING

Esophagus	Harderian Gland	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Mammary Gland	Skeletal Muscle	Thyroid Gland
Trachea			

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Marked
Kidney	Epithelium, Pelvis	Hyperplasia	Moderate
		Mineralization	Mild
		Necrosis	Acute, Mild
Liver	Papilla	Nephropathy	Marked
		Hyperplasia	Minimal
		Leukemia Mononuclear	
Lymph Node	Bile Duct	Inflammation	Chronic Active, Moderate
Prostate	Mesenteric	Leukemia Mononuclear	
Spleen	Mucosa	Hyperplasia	Diffuse, Mild
		Inflammation	Acute, Mild
		Inflammation	Chronic, Mild
Urinary Bladder	Submucosa		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 112

TRT#: 2

SEX: Male

DAY ON TEST: 431

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Adrenal Gland - Medulla  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular  
Trachea

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Preputial Gland  
Skeletal Muscle  
Testes  
Urinary Bladder

Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Prostate  
Skin  
Thymus

**MISSING**

Lymph Node - Mesenteric

Mammary Gland

**OBSERVATIONS**

Brain  
Heart  
Kidney  
Liver  
Lymph Node  
  
Pituitary Gland  
Spleen

Medulla  
  
Bile Duct  
Bronchial  
Mandibular

Hemorrhage  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Adenoma  
Leukemia Mononuclear

Mild  
Mild  
Minimal  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 113

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 649

**DOSE:** 10 MG/M3 24 MO

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Lacrimal Gland	Larynx
Lung	Lymph Node - Mandibular	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Skin		Fibroma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 114

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 94

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lymph Node

Mesenteric

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 115

TRT#: 2

SEX: Male

DAY ON TEST: 515

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla

Bone

Brain

Esophagus

Eye

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Larynx

Lung

Lymph Node - Bronchial

Lymph Node - Mandibular

Nose

Parathyroid Gland

Preputial Gland

Prostate

Salivary Glands

Seminal Vesicle

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Thymus

Thyroid Gland

Trachea

Urinary Bladder

**MISSING**

Harderian Gland

Lymph Node - Mesenteric

Mammary Gland

Skeletal Muscle

**OBSERVATIONS**

Adrenal Gland

Cortex

Vacuolization Cytoplasmic

Mild

Epididymis

Hypospermia

Heart

Cardiomyopathy

Mild

Kidney

Nephropathy

Mild

Liver

Bile Duct

Hyperplasia

Mild

Pituitary Gland

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 116

TRT#: 2

SEX: Male

DAY ON TEST: 669

DOSE: 10 MG/M3 24 MO

DISP: Dead

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	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Lymph Node - Mesenteric
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Hyperplasia	Moderate
Pituitary Gland		Adenoma	
Skin	Tail	Cyst Epithelial Inclusion	Multiple
	Tail	Hyperkeratosis	Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 117

TRT#: 2

SEX: Male

DAY ON TEST: 527

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Epididymis

Esophagus

Eye

Lacrimal Gland

Lymph Node - Bronchial

Lymph Node - Mandibular

Nose

Pancreas

Pituitary Gland

Prostate

Salivary Glands

Skin

Stomach - Forestomach

Stomach - Glandular

Testes

Thymus

Thyroid Gland

Trachea

Urinary Bladder

MISSING

Lymph Node - Mesenteric

Mammary Gland

Parathyroid Gland

Skeletal Muscle

AUTO PRECLUDES DIAG.

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Seminal Vesicle

INSUFFICIENT TISSUE

Preputial Gland

OBSERVATIONS

Brain

Leukemia Mononuclear

Heart

Cardiomyopathy

Moderate

Kidney

Leukemia Mononuclear

Larynx

Leukemia Mononuclear

Foreign Body

Mild

Liver

Bile Duct

Inflammation

Acute, Mild

Hyperplasia

Mild

Lung

Leukemia Mononuclear

Spleen

Leukemia Mononuclear

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 118

TRT#: 2

SEX: Male

DAY ON TEST: 617

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Pancreas	Parathyroid Gland
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Stomach - Glandular
Testes	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Thymus
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**OBSERVATIONS**

Heart		Cardiomyopathy	Minimal
	Atrium	Thrombosis	
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Minimal
Liver		Hepatocellular Adenoma	
	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
Lung		Metaplasia	Osseous, Minimal
Lymph Node	Mandibular	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Prostate		Inflammation	Chronic Active, Mild
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Inflammation	Acute, Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 119

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 703

**DOSE:** 10 MG/M3 24 MO

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Eye  
Lymph Node - Bronchial  
Pituitary Gland  
Skin  
Trachea

Brain  
Lacrimal Gland  
Lymph Node - Mandibular  
Prostate  
Stomach - Forestomach

Epididymis  
Larynx  
Nose  
Salivary Glands  
Testes

Esophagus  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Thyroid Gland

**MISSING**

Lymph Node - Mesenteric  
Thymus

Mammary Gland  
Urinary Bladder

Pancreas

Skeletal Muscle

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Stomach - Glandular

Intestine Small - Duodenum

**OBSERVATIONS**

Adrenal Gland  
Heart  
Kidney  
  
Liver  
Spleen

Medulla  
  
Epithelium, Pelvis

Pheochromocytoma Nos  
Cardiomyopathy  
Hyperplasia  
Mineralization  
Necrosis  
Leukemia Mononuclear

Moderate  
Mild  
Minimal  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

**ANIMAL ID:** 120

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 374

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Kidney  
Prostate  
Stomach - Forestomach

Adrenal Gland - Medulla  
Harderian Gland  
Intestine Small - Duodenum  
Lacrimal Gland  
Seminal Vesicle  
Stomach - Glandular

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Nose  
Skeletal Muscle  
Testes

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Skin  
Urinary Bladder

**MISSING**

Brain  
Larynx  
Parathyroid Gland  
Thyroid Gland

Esophagus  
Lung  
Pituitary Gland  
Trachea

Eye  
Lymph Node - Bronchial  
Preputial Gland

Heart  
Mammary Gland  
Thymus

**OBSERVATIONS**

Liver  
Lymph Node  
  
Spleen

Bile Duct  
Mandibular  
Mesenteric

Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Minimal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 121

TRT#: 2

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3 24 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Nose	Pancreas	Preputial Gland
Prostate	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Urinary Bladder	

**MISSING**

Esophagus	Heart	Lacrimal Gland	Larynx
Lung	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Parathyroid Gland	Salivary Glands	Skeletal Muscle	Thymus
Thyroid Gland	Trachea		

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 122

TRT#: 2

SEX: Male

DAY ON TEST: 726

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Nose	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Marked
Lymph Node	Mandibular	Leukemia Mononuclear	
Pancreas		Fibrosis	Moderate
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 123

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Seminal Vesicle  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Pituitary Gland  
Skeletal Muscle

Bone  
Eye  
Intestine Small - Duodenum  
Mammary Gland  
Preputial Gland  
Stomach - Forestomach

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

**MISSING**

Larynx  
Thyroid Gland

Lung  
Trachea

Lymph Node - Mesenteric

Thymus

**OBSERVATIONS**

Heart  
Kidney  
Liver  
  
Lymph Node  
  
Salivary Glands  
Skin  
  
Spleen  
Testes

Bile Duct  
  
Bronchial  
Mandibular  
Duct  
  
Sebaceous GI  
  
Interstit Cell

Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Metaplasia  
Fibrosarcoma  
Hyperplasia  
Leukemia Mononuclear  
Adenoma

Mild  
Moderate  
Moderate  
  
  
  
Squamous, Mild  
  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 124

TRT#: 2

SEX: Male

DAY ON TEST: 726

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lung
Mammary Gland	Nose	Pancreas	Seminal Vesicle
Skeletal Muscle	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea		

**MISSING**

Pituitary Gland	Preputial Gland
-----------------	-----------------

**OBSERVATIONS**

Adrenal Gland	Cortex, Zona Reticul	Necrosis	Moderate
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Prostate		Inflammation	Acute, Mild
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Skin		Keratoacanthoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Hyperkeratosis	Moderate
Tissue NOS	Fat	Necrosis	Acute, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 125

TRT#: 2

SEX: Male

DAY ON TEST: 422

DOSE: 10 MG/M3 24 MO

DISP: Missing

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Eye
Harderian Gland	Intestine Large - Rectum	Intestine Small - Duodenum	Lacrimal Gland
Larynx	Lung	Lymph Node - Bronchial	Lymph Node - Mandibular
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Skeletal Muscle	Skin	Spleen	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

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

Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Jejunum	Seminal Vesicle
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**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Minimal
Liver	Bile Duct	Hyperplasia	Mild
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 126

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 94

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lymph Node

Mesenteric

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 127

TRT#: 2

SEX: Male

DAY ON TEST: 700

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Nose	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Glandular	Thyroid Gland
Trachea			

MISSING

Larynx	Mammary Gland	Parathyroid Gland	Skeletal Muscle
Thymus			

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Epididymis		Hypospermia	
Heart		Leukemia Mononuclear	
Islets, Pancreatic		Adenoma	
Kidney		Leukemia Mononuclear	
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Acute, Moderate
Pancreas		Leukemia Mononuclear	
Pituitary Gland		Leukemia Mononuclear	
Skin	Tail	Hyperkeratosis	Moderate
		Keratoacanthoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Ulcer	Moderate
Testes		Atrophy	Marked
Tissue NOS		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:58  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 127

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 700

**DOSE:** 10 MG/M3 24 MO

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Urinary Bladder

Leukemia Mononuclear

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 128

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Intestine Large	Intestine Small
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Mammary Gland	Nose	Parathyroid Gland	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	

**MISSING**

Lymph Node - Mesenteric	Pituitary Gland	Preputial Gland	Prostate
Urinary Bladder			

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thymus		Cyst	Multiple, Mild
Tissue NOS		Fibrosarcoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 129

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 374

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Prostate  
Spleen  
Urinary Bladder

Bone  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Seminal Vesicle  
Stomach - Forestomach

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Liver  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Pituitary Gland  
Skin  
Testes

**MISSING**

Esophagus  
Lymph Node - Mesenteric  
Salivary Glands

Heart  
Mammary Gland  
Thymus

Larynx  
Parathyroid Gland  
Thyroid Gland

Lung  
Preputial Gland  
Trachea

**OBSERVATIONS**

Adrenal Gland  
Kidney

Medulla

Pheochromocytoma Nos  
Nephropathy

Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 130

TRT#: 2

SEX: Male

DAY ON TEST: 623

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Intestine Large - Rectum	Intestine Small - Duodenum
Lacrimal Gland	Larynx	Liver	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Pancreas	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Epididymis	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Lymph Node - Mesenteric	Mammary Gland	Preputial Gland	Thymus

**AUTO PRECLUDES DIAG.**

Intestine Small - Ileum	Intestine Small - Jejunum
-------------------------	---------------------------

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Pituitary Gland		Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 131

TRT#: 2

SEX: Male

DAY ON TEST: 646

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Brain	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lung	Lymph Node - Bronchial	Lymph Node - Mandibular	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Preputial Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
		Vacuolization Cytoplasmic	Mild
Pituitary Gland		Adenoma	
Skin	Subcut Tiss	Fibrosarcoma	
Testes		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 132

TRT#: 2

SEX: Male

DAY ON TEST: 603

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Rectum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Preputial Gland	Thymus
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**AUTO PRECLUDES DIAG.**

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

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Hypercellularity	Mild
Heart		Cardiomyopathy	Moderate
	Atrium Lft, Valve	Thrombosis	
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Nose		Foreign Body	Mild
Pancreas		Fibrosis	Focal, Minimal
		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 133

TRT#: 2

SEX: Male

DAY ON TEST: 655

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Mammary Gland	Nose	Parathyroid Gland
Preputial Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Harderian Gland	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Fibrosis	Focal, Mild
		Leukemia Mononuclear	
Prostate		Hemorrhage	Moderate
		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 134

TRT#: 2

SEX: Male

DAY ON TEST: 422

DOSE: 10 MG/M3 24 MO

DISP: Missing

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Nose	Pancreas	Parathyroid Gland
Pituitary Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Lymph Node - Mesenteric	Mammary Gland	Thymus
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AUTO PRECLUDES DIAG.

Intestine Small - Ileum

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Brain		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
Islets, Pancreatic		Hyperplasia	Mild
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Hyperkeratosis	Moderate
	Forestomach, Submucosa	Inflammation	Acute, Moderate
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 135

TRT#: 2

SEX: Male

DAY ON TEST: 668

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Larynx	Mammary Gland
Parathyroid Gland	Skeletal Muscle	Skin	Thyroid Gland
Trachea			

**MISSING**

Thymus

**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear
	Medulla	Leukemia Mononuclear
Bone Marrow		Leukemia Mononuclear
Epididymis		Leukemia Mononuclear
Esophagus		Leukemia Mononuclear
Eye		Leukemia Mononuclear
Heart		Leukemia Mononuclear
Intestine Large	Cecum	Leukemia Mononuclear
	Colon	Leukemia Mononuclear
	Rectum	Leukemia Mononuclear
Intestine Small	Duodenum	Leukemia Mononuclear
	Ileum	Leukemia Mononuclear
	Jejunum	Leukemia Mononuclear
Kidney		Leukemia Mononuclear
Lacrimal Gland		Leukemia Mononuclear
Liver		Leukemia Mononuclear
Lung		Leukemia Mononuclear
Lymph Node	Bronchial	Leukemia Mononuclear
	Mandibular	Leukemia Mononuclear
	Mesenteric	Leukemia Mononuclear
Nose		Leukemia Mononuclear
Pancreas		Leukemia Mononuclear
Pituitary Gland		Adenoma
Prostate		Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 135

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 668

**DOSE:** 10 MG/M3 24 MO

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Salivary Glands		Leukemia Mononuclear
Seminal Vesicle		Leukemia Mononuclear
Spleen		Leukemia Mononuclear
Stomach	Forestomach	Leukemia Mononuclear
	Glandular	Leukemia Mononuclear
Testes		Leukemia Mononuclear
Tissue NOS		Leukemia Mononuclear
Urinary Bladder		Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 136

TRT#: 2

SEX: Male

DAY ON TEST: 751

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Mammary Gland	Nose	Parathyroid Gland
Skeletal Muscle	Skin	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Seminal Vesicle	
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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	Pancreas	Preputial Gland
Salivary Glands	Stomach - Forestomach	Stomach - Glandular	

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 137

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mandibular  
Prostate  
Skin  
Thymus

Adrenal Gland - Medulla  
Eye  
Intestine Small - Duodenum  
Larynx  
Nose  
Salivary Glands  
Spleen  
Thyroid Gland

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

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Penis  
Skeletal Muscle  
Stomach - Glandular  
Urinary Bladder

**MISSING**

Harderian Gland

Lymph Node - Mesenteric

Mammary Gland

Preputial Gland

**OBSERVATIONS**

Epididymis  
Heart  
Kidney  
Liver  
Pituitary Gland  
Testes

Bile Duct  
Interstit Cell

Hypospermia  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Hyperplasia  
Adenoma

Mild  
Moderate  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 138

TRT#: 2

SEX: Male

DAY ON TEST: 736

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Eye	Lacrimal Gland	Larynx
Nose	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Skin	Testes	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Harderian Gland	Mammary Gland	Skeletal Muscle	Thymus
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AUTO PRECLUDES DIAG.

Seminal Vesicle

INSUFFICIENT TISSUE

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

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
Kidney		Nephropathy	Mild
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

**ANIMAL ID:** 139

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 627

**DOSE:** 10 MG/M3 24 MO

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Lacrimal Gland	Larynx	Mammary Gland
Nose	Parathyroid Gland	Preputial Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Trachea

**MISSING**

Harderian Gland	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Pancreas	Salivary Glands	Thymus	

**AUTO PRECLUDES DIAG.**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Kidney	Liver	Pituitary Gland
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Urinary Bladder

**OBSERVATIONS**

Heart	Cardiomyopathy	Mild
Spleen	Leukemia Mononuclear	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 140

TRT#: 2

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3 24 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla

Bone

Bone Marrow

Brain

Epididymis

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Lymph Node - Bronchial

Nose

Pancreas

Preputial Gland

Prostate

Seminal Vesicle

Skeletal Muscle

Stomach - Forestomach

Stomach - Glandular

Testes

Urinary Bladder

**MISSING**

Esophagus

Eye

Harderian Gland

Heart

Larynx

Lung

Lymph Node - Mandibular

Lymph Node - Mesenteric

Mammary Gland

Parathyroid Gland

Salivary Glands

Thymus

Thyroid Gland

Trachea

**OBSERVATIONS**

Adrenal Gland

Cortex

Vacuolization Cytoplasmic

Mild

Kidney

Nephropathy

Minimal

Liver

Necrosis

Multifocal, Mild

Pituitary Gland

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 142

TRT#: 2

SEX: Male

DAY ON TEST: 681

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Lacrimal Gland  
Mammary Gland  
Prostate  
Skin  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Larynx  
Nose  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Bone  
Esophagus  
Lung  
Pancreas  
Seminal Vesicle  
Testes

Bone Marrow  
Intestine Small - Duodenum  
Lymph Node - Bronchial  
Parathyroid Gland  
Skeletal Muscle  
Thyroid Gland

**MISSING**

Lymph Node - Mesenteric

Preputial Gland

Thymus

**AUTO PRECLUDES DIAG.**

Eye  
Intestine Small - Ileum

Intestine Large - Cecum  
Intestine Small - Jejunum

Intestine Large - Colon

Intestine Large - Rectum

**OBSERVATIONS**

Heart  
Kidney  
Liver

Bile Duct

Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Adenoma  
Leukemia Mononuclear

Moderate  
Mild  
Moderate

Lymph Node  
Pituitary Gland  
Spleen

Mandibular

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 143

TRT#: 2

SEX: Male

DAY ON TEST: 716

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Nose	Parathyroid Gland
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Glandular
Trachea			

**OBSERVATIONS**

Adrenal Gland	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Nos	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
	Atrium	Thrombosis	Mild
Liver		Leukemia Mononuclear	
Lung	Alveolus	Hemorrhage	Multifocal, Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Diffuse, Marked
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Hyperkeratosis	Moderate
	Forestomach	Squamous Cell Papilloma	
Testes	Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 144

TRT#: 2

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

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
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Nose	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thyroid Gland	Trachea	

**MISSING**

Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Hyperplasia	Mild
Note: 1991 CONVERSION DISCREPANCY. ORIGINAL DIAGNOSIS SITE NOT SPECIFIED.			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Pancreas		Fibrosis	Moderate
Pituitary Gland		Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 145

TRT#: 2

SEX: Male

DAY ON TEST: 715

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Pancreas	Parathyroid Gland	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Moderate
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
	Hepatocyte	Necrosis	Acute, Focal, Mild
	Hepatocyte	Vacuolization Cytoplasmic	Mild
Mammary Gland		Cyst	Multiple
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Testes		Degeneration	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 146

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 94

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lymph Node

Mesenteric

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 147

TRT#: 2

SEX: Male

DAY ON TEST: 623

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Esophagus	Lacrimal Gland	Parathyroid Gland
Skeletal Muscle	Skin		

**MISSING**

Brain	Harderian Gland	Larynx	Lymph Node - Mesenteric
Pituitary Gland	Preputial Gland	Prostate	Thymus

**AUTO PRECLUDES DIAG.**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Epididymis	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Kidney	Nose
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thyroid Gland	Tissue NOS	Trachea
Urinary Bladder			

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 148

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lung	Lymph Node - Bronchial	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Preputial Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Degeneration	Mild
	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lymph Node	Mandibular	Hyperplasia	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach, Submucosa	Inflammation	Acute, Moderate
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 149

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 94

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lymph Node

Mesenteric

Hyperplasia

Mild

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

**ANIMAL ID:** 150

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 649

**DOSE:** 10 MG/M3 24 MO

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Bone

Brain

Esophagus

Eye

Intestine Large - Cecum

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Larynx

Lung

Lymph Node - Mandibular

Lymph Node - Mesenteric

Nose

Pancreas

Parathyroid Gland

Prostate

Salivary Glands

Seminal Vesicle

Skeletal Muscle

Skin

Spleen

Stomach - Glandular

Thymus

Thyroid Gland

Trachea

Urinary Bladder

**MISSING**

Lymph Node - Bronchial

Mammary Gland

**AUTO PRECLUDES DIAG.**

Intestine Large - Colon

**OBSERVATIONS**

Epididymis

Hypospermia

Heart

Cardiomyopathy

Mild

Kidney

Nephropathy

Minimal

Liver

Bile Duct

Hyperplasia

Moderate

Hepatocyte

Vacuolization Cytoplasmic

Moderate

Pituitary Gland

Adenoma

Stomach

Forestomach

Hyperkeratosis

Marked

Epithelium, Forestomach

Hyperplasia

Moderate

Testes

Degeneration

Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 151

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 223

**DOSE:** 10 MG/M3 24 MO

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Lacrimal Gland  
Mammary Gland  
Salivary Glands  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Lung  
Nose  
Seminal Vesicle

Bone  
Esophagus  
Lymph Node - Bronchial  
Parathyroid Gland  
Skin

Bone Marrow  
Eye  
Lymph Node - Mandibular  
Prostate  
Testes

**MISSING**

Harderian Gland  
Thymus

Lymph Node - Mesenteric

Preputial Gland

Skeletal Muscle

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum  
Spleen

Intestine Large - Colon  
Intestine Small - Jejunum  
Stomach - Forestomach

Intestine Large - Rectum  
Pancreas  
Stomach - Glandular

Intestine Small - Duodenum  
Pituitary Gland  
Thyroid Gland

**OBSERVATIONS**

Heart  
Liver

Bile Duct

Cardiomyopathy  
Hyperplasia

Mild  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:58

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

**Lab:** NORTHROP

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**ANIMAL ID:** 152

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 94

**DOSE:** 10 MG/M3 24 MO

**DISP:** Interval Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lymph Node

Mesenteric

Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 153

TRT#: 2

SEX: Male

DAY ON TEST: 612

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Kidney	Lacrimal Gland
Larynx	Nose	Parathyroid Gland	Pituitary Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Bronchial	Lymph Node - Mesenteric	Mammary Gland	Thymus
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**OBSERVATIONS**

Heart		Cardiomyopathy	Minimal
Liver	Bile Duct	Hyperplasia	Moderate
Lung	Peribronchiolr	Inflammation	Chronic Active, Mild
Lymph Node	Mandibular	Hyperplasia	Mild
Pancreas		Fibrosis	Mild
Skin		Squamous Cell Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 155

TRT#: 2

SEX: Male

DAY ON TEST: 569

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Forestomach	Stomach - Glandular	Testes	Thyroid Gland
Trachea	Urinary Bladder		

**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Spleen		Leukemia Mononuclear	
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 156

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

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
Lacrimal Gland	Lymph Node - Mandibular	Nose	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Glandular	Testes	Urinary Bladder	

**MISSING**

Harderian Gland	Lung	Lymph Node - Bronchial	Lymph Node - Mesenteric
Parathyroid Gland	Preputial Gland	Thymus	Thyroid Gland
Trachea			

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
Mammary Gland		Hyperplasia	Cystic, Mild
Pancreas		Atrophy	Mild
		Fibrosis	Mild
Pituitary Gland		Adenoma	
Salivary Glands	Duct	Metaplasia	Squamous, Minimal
Stomach	Forestomach	Ulcer	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 157

TRT#: 2

SEX: Male

DAY ON TEST: 649

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lung	Lymph Node - Bronchial	Lymph Node - Mandibular
Nose	Pancreas	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Adrenal Gland - Medulla	Harderian Gland	Lymph Node - Mesenteric	Mammary Gland
Parathyroid Gland	Pituitary Gland		

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Mild
Testes		Degeneration	Moderate
Tissue NOS		Fibroma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 158

TRT#: 2

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3 24 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Prostate  
Stomach - Forestomach

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Seminal Vesicle  
Stomach - Glandular

Bone  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Skin  
Testes

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Preputial Gland  
Spleen  
Urinary Bladder

**MISSING**

Esophagus  
Lymph Node - Mesenteric  
Thyroid Gland

Heart  
Mammary Gland  
Trachea

Lung  
Skeletal Muscle

Lymph Node - Mandibular  
Thymus

**OBSERVATIONS**

Kidney  
Liver  
Pituitary Gland

Bile Duct

Nephropathy  
Hyperplasia  
Cyst

Mild  
Mild  
Multiple

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:58

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 159

TRT#: 2

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Mammary Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Nose		Foreign Body	Mild
Pituitary Gland		Adenoma	
Stomach	Forestomach	Edema	Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 160

TRT#: 2

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 24 MO

DISP: Moribund

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 - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Lymph Node - Mandibular	Mammary Gland	Nose
Preputial Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Urinary Bladder			

**MISSING**

Harderian Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mesenteric	Parathyroid Gland	Thymus	Thyroid Gland
Trachea			

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
Pancreas		Atrophy	Moderate
		Fibrosis	Moderate
Pituitary Gland		Adenoma	
Prostate		Hyperplasia	Mild
		Inflammation	Acute, Marked
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 161

TRT#: 2

SEX: Male

DAY ON TEST: 765

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Nose
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Harderian Gland	Mammary Gland	Preputial Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Hypercellularity	Moderate
Epididymis		Hypospermia	Moderate
Heart		Leukemia Mononuclear	
Islets, Pancreatic		Adenoma	
Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Atrophy	Moderate
		Fibrosis	Moderate
Pituitary Gland		Hyperplasia	Mild
Prostate		Inflammation	Chronic, Mild
Skin		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thymus		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 161

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:** 765

**DOSE:** 10 MG/M3 24 MO

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 162

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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
Lacrimal Gland	Lymph Node - Bronchial	Lymph Node - Mandibular	Mammary Gland
Nose	Preputial Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mesenteric	Parathyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Cyst	Multiple
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Larynx		Carcinoma	Metastatic (Thyroid Gland)
Liver	Bile Duct	Hyperplasia	Mild
		Necrosis	Coagulative, Focal, Mild
Lung		Inflammation	Granulomatous, Focal, Mild
Pancreas		Atrophy	Mild
		Fibrosis	Mild
Pituitary Gland		Adenoma	
Skin	Tail	Cyst Dermoid	
Testes	Interstit Cell	Adenoma	
Thyroid Gland	Follicular Cel	Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 163

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Mammary Gland	Nose
Parathyroid Gland	Prostate	Salivary Glands	Skeletal Muscle
Skin	Stomach - Forestomach	Thymus	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mesenteric	Preputial Gland	Stomach - Glandular
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Moderate
Pancreas		Atrophy	Mild
		Fibrosis	Mild
Spleen		Fibrosis	Mild
Testes	Interstit Cell	Adenoma	
Thyroid Gland		Adenoma	
		Cyst	Multiple

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 164

TRT#: 2

SEX: Male

DAY ON TEST: 479

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Parathyroid Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Preputial Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Hepatocyte	Necrosis	Focal, Minimal
Mammary Gland		Cyst	Multiple, Minimal
Pancreas		Atrophy	Minimal
		Fibrosis	Minimal
Pituitary Gland		Adenoma	
Stomach	Forestomach	Ulcer	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 165

TRT#: 2

SEX: Male

DAY ON TEST: 655

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Seminal Vesicle  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Kidney  
Lymph Node - Mandibular  
Skeletal Muscle  
Testes

Bone  
Eye  
Intestine Small - Duodenum  
Lacrimal Gland  
Pancreas  
Skin  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Larynx  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

**MISSING**

Mammary Gland

Thymus

**OBSERVATIONS**

Bone Marrow  
Heart  
Islets, Pancreatic  
Liver  
Lung  
Lymph Node  
Nose  
Pituitary Gland  
Prostate  
Salivary Glands  
Spleen

Mesenteric  
Lumen

Hypercellularity  
Cardiomyopathy  
Hyperplasia  
Leukemia Mononuclear  
Inflammation  
Leukemia Mononuclear  
Inflammation  
Hyperplasia  
Hyperplasia  
Fibrosarcoma  
Leukemia Mononuclear

Mild  
Minimal  
Mild  
Chronic, Focal, Mild  
Acute, Mild  
Mild  
Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 166

TRT#: 2

SEX: Male

DAY ON TEST: 627

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Pancreas  
Seminal Vesicle  
Stomach - Forestomach  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Skeletal Muscle  
Stomach - Glandular

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Larynx  
Mammary Gland  
Pituitary Gland  
Skin  
Testes

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Nose  
Salivary Glands  
Spleen  
Trachea

**MISSING**

Lymph Node - Mesenteric

Preputial Gland

Prostate

Thymus

**OBSERVATIONS**

Adrenal Gland  
Heart  
Kidney  
Liver  
Thyroid Gland

Medulla  
  
Bile Duct

Pheochromocytoma Nos  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Cyst

Mild  
Moderate  
Moderate  
Multiple, Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 167

TRT#: 2

SEX: Male

DAY ON TEST: 683

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lung	Lymph Node - Bronchial	Lymph Node - Mandibular	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Lymph Node - Mesenteric	Preputial Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Brain		Gliosis	Focal, Mild
Heart		Cardiomyopathy	Moderate
Intestine Large	Colon	Ulcer	Focal, Minimal
Kidney		Inflammation	Acute, Mild
		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Moderate
Pituitary Gland		Adenoma	
		Cyst	Multiple, Minimal
Prostate		Hemorrhage	Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 168

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lung	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Mammary Gland	Nose	Pancreas	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Spleen	Stomach - Forestomach	Stomach - Glandular
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
Kidney	Epithelium, Pelvis	Hyperplasia	Minimal
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Skin	Dermis, Tail	Cyst	Multiple
Testes	Interstit Cell	Adenoma	
Thymus		Cyst	Multiple
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 169

TRT#: 2

SEX: Male

DAY ON TEST: 669

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lung	Lymph Node - Bronchial	Lymph Node - Mandibular
Nose	Parathyroid Gland	Prostate	Salivary Glands
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Pancreas		Atrophy	Mild
		Fibrosis	Mild
Pituitary Gland		Adenoma	
Spleen		Fibrosis	Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 170

TRT#: 2

SEX: Male

DAY ON TEST: 724

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Eye	Lacrimal Gland	Larynx
Lymph Node - Mesenteric	Parathyroid Gland	Salivary Glands	Skeletal Muscle
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland	Preputial Gland	Thymus	
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AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Nose	Pancreas
Prostate	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Skin	Epidermis, Tail	Cyst	Multiple
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 171

TRT#: 2

SEX: Male

DAY ON TEST: 574

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mandibular  
Prostate  
Skin  
Testes  
Urinary Bladder

Bone  
Eye  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Salivary Glands  
Spleen  
Thymus

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Forestomach  
Thyroid Gland

Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Preputial Gland  
Skeletal Muscle  
Stomach - Glandular  
Trachea

**MISSING**

Adrenal Gland - Medulla  
Pituitary Gland

Harderian Gland

Lymph Node - Mesenteric

Mammary Gland

**OBSERVATIONS**

Brain  
Heart  
Kidney  
Liver  
Nose

Cerebrum  
  
  
Bile Duct  
Lumen

Medulloblastoma Nos  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Inflammation

Mild  
Moderate  
Mild  
Acute, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 172

TRT#: 2

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3 24 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Seminal Vesicle  
Stomach - Forestomach

Bone  
Harderian Gland  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Preputial Gland  
Skeletal Muscle  
Stomach - Glandular

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Prostate  
Skin  
Testes

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Spleen  
Urinary Bladder

**MISSING**

Adrenal Gland - Medulla  
Lung  
Pituitary Gland

Esophagus  
Lymph Node - Bronchial  
Thymus

Heart  
Mammary Gland  
Thyroid Gland

Larynx  
Parathyroid Gland  
Trachea

**INSUFFICIENT TISSUE**

Eye

**OBSERVATIONS**

Kidney  
Liver

Bile Duct

Nephropathy  
Hyperplasia

Mild  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 173

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lacrimal Gland
Larynx	Lung	Lymph Node - Bronchial	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Pancreas	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Trachea	Urinary Bladder		

**MISSING**

Preputial Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Necrosis	Focal, Minimal
Pituitary Gland		Adenoma	
Skin	Dermis, Tail	Inflammation	Acute, Mild
Testes	Interstit Cell	Adenoma	
Thyroid Gland		Cyst	Multiple, Mild
Tissue NOS		Fibrosarcoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 174

TRT#: 2

SEX: Male

DAY ON TEST: 682

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Pancreas  
Seminal Vesicle  
Testes  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Skeletal Muscle  
Thymus

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Larynx  
Lymph Node - Mesenteric  
Preputial Gland  
Skin  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular  
Trachea

**MISSING**

Mammary Gland

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland  
Heart  
Kidney  
Liver  
Prostate  
Spleen

Cortex  
  
Bile Duct

Vacuolization Cytoplasmic  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Inflammation  
Fibrosis

Mild  
Mild  
Mild  
Moderate  
Chronic Active, Moderate  
Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 175

TRT#: 2

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 24 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Pancreas  
Seminal Vesicle  
Stomach - Glandular

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Skeletal Muscle  
Thymus

Bone  
Eye  
Intestine Small - Duodenum  
Larynx  
Mammary Gland  
Penis  
Skin  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Nose  
Salivary Glands  
Stomach - Forestomach  
Trachea

**MISSING**

Harderian Gland

Pituitary Gland

Preputial Gland

**OBSERVATIONS**

Heart  
Islets, Pancreatic  
Kidney  
Liver  
  
Prostate  
Spleen  
Testes

Bile Duct

Interstit Cell

Cardiomyopathy  
Adenoma  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Inflammation  
Leukemia Mononuclear  
Adenoma

Moderate

Moderate

Moderate

Acute, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 176

TRT#: 2

SEX: Male

DAY ON TEST: 608

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach, Submucosa	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 177

TRT#: 2

SEX: Male

DAY ON TEST: 561

DOSE: 10 MG/M3 24 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Lacrimal Gland  
Mammary Gland  
Pituitary Gland  
Seminal Vesicle  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Larynx  
Nose  
Preputial Gland  
Skeletal Muscle  
Thymus

Bone  
Esophagus  
Lymph Node - Bronchial  
Pancreas  
Prostate  
Skin  
Thyroid Gland

Bone Marrow  
Eye  
Lymph Node - Mandibular  
Parathyroid Gland  
Salivary Glands  
Spleen  
Trachea

**MISSING**

Harderian Gland

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Stomach - Glandular

Intestine Small - Duodenum

**OBSERVATIONS**

Heart  
Kidney  
Testes

Interstit Cell

Cardiomyopathy  
Nephropathy  
Adenoma

Mild  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 178

TRT#: 2

SEX: Male

DAY ON TEST: 422

DOSE: 10 MG/M3 24 MO

DISP: Missing

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Brain	Esophagus	Eye	Harderian Gland
Lung	Lymph Node - Bronchial	Parathyroid Gland	Thyroid Gland
Trachea			

**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Epididymis	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Kidney
Lacrimal Gland	Larynx	Lymph Node - Mandibular	Lymph Node - Mesenteric
Mammary Gland	Nose	Pancreas	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Urinary Bladder	

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Mild
Liver	Bile Duct	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 201

TRT#: 1

SEX: Male

DAY ON TEST: 737

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Lymph Node - Mandibular	Mammary Gland
Salivary Glands	Seminal Vesicle	Skin	Stomach - Forestomach
Stomach - Glandular	Urinary Bladder		

**MISSING**

Harderian Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mesenteric	Parathyroid Gland	Preputial Gland	Thymus
Trachea			

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Hyperplasia	Minimal
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Hepatocyte	Adenoma	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lymph Node	Pancreatic	Pigmentation	Mild
Note: HEMOSIDERIN PIGMENT			
Nose	Lumen	Inflammation	Acute, Minimal
		Metaplasia	Focal, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Chronic, Mild
Skeletal Muscle	Diaphragm	Mesothelioma Malignant	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:59

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

**Lab:** NORTHROP

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**ANIMAL ID:** 201

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 737

**DOSE:** CONTROL

**DISP:** Moribund

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

	Seminif Tub	Degeneration	Mild
	Tunic	Mesothelioma Malignant	
Thyroid Gland	C Cell	Carcinoma	
PRIMARY CAUSE OF DEATH	-		

---

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 202

TRT#: 1

SEX: Male

DAY ON TEST: 635

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Nose
Pancreas	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Bronchial	Lymph Node - Mesenteric	Skeletal Muscle	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Moderate
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
Lung	Venule	Mineralization	Focal, Mild
Lymph Node	Mandibular	Congestion	Mild
Mammary Gland		Cyst	
Pituitary Gland	Pars Distalis	Adenoma	
Testes		Atrophy	Diffuse, Marked
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 203

TRT#: 1

SEX: Male

DAY ON TEST: 787

DOSE: CONTROL

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
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Mammary Gland	Pancreas	Preputial Gland	Seminal Vesicle
Skeletal Muscle	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Harderian Gland	Lymph Node - Mesenteric	Parathyroid Gland	
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OBSERVATIONS

Epididymis		Hypospermia	Mild
Eye	Lens	Degeneration	Minimal
Heart		Cardiomyopathy	Marked
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Hepatocyte	Adenoma	
	Bile Duct	Hyperplasia	Marked
Lung		Mineralization	Mild
Note: VESSEL WALL			
Nose	Lumen	Foreign Body	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Acute, Moderate
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Skin	Tail	Necrosis	Acute, Marked
		Parakeratosis	Moderate
		Trichoepithelioma	
	Tail	Ulcer	Marked
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:59

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

**Lab:** NORTHROP

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**ANIMAL ID:** 203

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 787

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes	Interstit Cell	Adenoma
PRIMARY CAUSE OF DEATH	-	

---

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 204

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 466

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 205

TRT#: 1

SEX: Male

DAY ON TEST: 738

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Nose	Preputial Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Urinary Bladder		

**MISSING**

Harderian Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mesenteric	Mammary Gland	Parathyroid Gland	Thyroid Gland
Trachea			

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Focal Cellular Change	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
Pancreas	Acinar Cell	Adenoma	
	Perivascular	Inflammation	Chronic, Mild
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 205

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

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

**DAY ON TEST:** 738  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes		Polyarteritis	Mild
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PRIMARY CAUSE OF DEATH	-		
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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 206

TRT#: 1

SEX: Male

DAY ON TEST: 787

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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	Lacrimal Gland	Lung	Nose
Pancreas	Parathyroid Gland	Preputial Gland	Prostate
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Larynx	Lymph Node - Mesenteric	Mammary Gland	Skeletal Muscle
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Focal Cellular Change	Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mediastinal	Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Skin	Tail	Hyperkeratosis	Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thymus		Leukemia Mononuclear	
Tissue NOS		Hemangiosarcoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 206

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 787

**DOSE:** CONTROL

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 207

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	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	Larynx	Lymph Node - Bronchial
Nose	Preputial Gland	Prostate	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea			

MISSING

Lymph Node - Mesenteric	Mammary Gland	Skeletal Muscle	Skin
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OBSERVATIONS

Adrenal Gland	Capsule	Mesothelioma Malignant	
	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Lacrimal Gland		Inflammation	Acute, Mild
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Hyperplasia	Focal, Mild
Note: TYPE II PNEUMONIA			
Lymph Node	Mandibular	Leukemia Mononuclear	
Pancreas		Pigmentation	Hemosiderin, Moderate
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
	Tunic	Mesothelioma Malignant	
Urinary Bladder	Serosa	Mesothelioma Malignant	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 207

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 729

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 209

TRT#: 1

SEX: Male

DAY ON TEST: 722

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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	Lacrimal Gland	Larynx	Lung
Parathyroid Gland	Preputial Gland	Prostate	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Salivary Glands	Skeletal Muscle	
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland		Cyst	
Nose	Glands	Inflammation	Acute, Minimal
Pancreas	Acinus	Fibrosis	Focal, Mild
Pituitary Gland		Hyperplasia	Mild
Seminal Vesicle		Inflammation	Chronic Active, Marked
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
		Atrophy	Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 209

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 722

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 210

TRT#: 1

SEX: Male

DAY ON TEST: 373

DOSE: CONTROL

DISP: Interval Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Lymph Node - Bronchial  
Skin  
Testes

Bone  
Eye  
Intestine Small - Duodenum  
Pancreas  
Spleen  
Urinary Bladder

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Prostate  
Stomach - Forestomach

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Seminal Vesicle  
Stomach - Glandular

MISSING

Esophagus  
Larynx  
Mammary Gland  
Salivary Glands  
Trachea

Harderian Gland  
Lung  
Nose  
Skeletal Muscle

Heart  
Lymph Node - Mandibular  
Parathyroid Gland  
Thymus

Lacrimal Gland  
Lymph Node - Mesenteric  
Preputial Gland  
Thyroid Gland

OBSERVATIONS

Adrenal Gland  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Pituitary Gland

Cortex  
  
  
  
Bile Duct  
Pars Distalis

Vacuolization Cytoplasmic  
Nephropathy  
  
  
Hyperplasia  
Adenoma

Mild  
Minimal  
  
  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 211

TRT#: 1

SEX: Male

DAY ON TEST: 710

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lacrimal Gland
Lung	Lymph Node - Bronchial	Lymph Node - Mandibular	Mammary Gland
Pancreas	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular
Testes	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Larynx	Lymph Node - Mesenteric	Skeletal Muscle	Thymus
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**OBSERVATIONS**

Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Bile Stasis	Moderate
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Nose	Lumen	Foreign Body	Mild
		Inflammation	Acute, Mild
Pituitary Gland	Pars Distalis	Adenoma	
Skin	Tail	Hyperkeratosis	Mild
		Keratoacanthoma	
	Tail	Ulcer	Mild
Note: SU			
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 212

TRT#: 1

SEX: Male

DAY ON TEST: 787

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Eye
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Harderian Gland	Mammary Gland
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AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon
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OBSERVATIONS

Adrenal Gland	Capsule	Mesothelioma Malignant	
Heart		Cardiomyopathy	Marked
		Mineralization	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
Lymph Node	Bronchial	Mesothelioma Malignant	
Pancreas		Fibrosis	Mild
Parathyroid Gland		Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
Tissue NOS	Fat	Mesothelioma Malignant	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 214

TRT#: 1

SEX: Male

DAY ON TEST: 716

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Liver  
Parathyroid Gland  
Seminal Vesicle  
Thymus

Adrenal Gland - Medulla  
Esophagus  
Lung  
Preputial Gland  
Skeletal Muscle  
Trachea

Bone  
Eye  
Lymph Node - Bronchial  
Prostate  
Spleen  
Urinary Bladder

Brain  
Harderian Gland  
Lymph Node - Mandibular  
Salivary Glands  
Testes

**MISSING**

Mammary Gland

Skin

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum  
Larynx  
Stomach - Forestomach

Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Stomach - Glandular

Intestine Large - Rectum  
Kidney  
Nose  
Thyroid Gland

Intestine Small - Duodenum  
Lacrimal Gland  
Pancreas

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Bone Marrow  
Heart  
Lacrimal GI

Hyperplasia  
Cardiomyopathy

Mild  
Moderate

Note: LACRIMAL DUCT

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 215

TRT#: 1

SEX: Male

DAY ON TEST: 565

DOSE: CONTROL

DISP: Dead

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Preputial Gland	Stomach - Glandular
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
Lung	Alveolar Epith	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 217

TRT#: 1

DOSE: CONTROL

SEX: Male

DISP: Dead

DAY ON TEST: 773

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Pancreas	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Harderian Gland	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Fibrosis	Focal, Mild
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Nose		Inflammation	Acute, Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 218

TRT#: 1

SEX: Male

DAY ON TEST: 634

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Parathyroid Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Mammary Gland	Preputial Gland
Skeletal Muscle	Skin		

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Minimal
Pituitary Gland	Pars Distalis	Adenoma	
Stomach	Forestomach	Ulcer	Mild
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 219

TRT#: 1

SEX: Male

DAY ON TEST: 754

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland	Skeletal Muscle	Skin
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
	Atrium	Thrombosis	
Kidney		Nephropathy	Moderate
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 220

TRT#: 1

SEX: Male

DAY ON TEST: 726

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Parathyroid Gland  
Stomach - Forestomach  
Trachea

Adrenal Gland - Medulla  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mesenteric  
Preputial Gland  
Stomach - Glandular  
Urinary Bladder

Bone  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Nose  
Prostate  
Thymus

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Pancreas  
Salivary Glands  
Thyroid Gland

MISSING

Mammary Gland

Skeletal Muscle

Skin

OBSERVATIONS

Bone Marrow  
Epididymis  
Heart  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Lung  
Pituitary Gland  
Seminal Vesicle  
Spleen  
Testes

Bile Duct

Interstit Cell  
Interstit Cell

Leukemia Mononuclear  
Hypospermia  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Hyperplasia  
Inflammation  
Leukemia Mononuclear  
Adenoma  
Hyperplasia

Mild  
Mild  
Moderate  
Moderate  
Mild  
Acute, Minimal  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 221

TRT#: 1

SEX: Male

DAY ON TEST: 688

DOSE: CONTROL

DISP: Dead

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	Lacrimal Gland	Larynx
Lung	Lymph Node - Bronchial	Lymph Node - Mesenteric	Nose
Pancreas	Parathyroid Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Preputial Gland	Salivary Glands
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**OBSERVATIONS**

Epididymis		Hyospermia	Mild
Heart		Cardiomyopathy	Minimal
Kidney		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Hepatocyte	Vacuolization Cytoplasmic	Diffuse, Moderate
Mammary Gland		Cyst	
Pituitary Gland	Pars Distalis	Adenoma	
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 222

TRT#: 1

SEX: Male

DAY ON TEST: 600

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

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

Lacrimal Gland

Larynx

Lymph Node - Bronchial

Lymph Node - Mandibular

Lymph Node - Mesenteric

Nose

Pancreas

Parathyroid Gland

Preputial Gland

Salivary Glands

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Testes

Thymus

Thyroid Gland

Trachea

**MISSING**

Prostate

Seminal Vesicle

Skeletal Muscle

Urinary Bladder

**OBSERVATIONS**

Heart

Cardiomyopathy

Moderate

Mineralization

Moderate

Kidney

Mineralization

Moderate

Nephropathy

Marked

Lacrimal GI

Note: LACRIMAL DUCT

Liver

Hepatocyte

Vacuolization Cytoplasmic

Mild

Lung

Alveolus

Inflammation

Acute, Moderate

Alveolar Epith

Necrosis

Acute, Moderate

Note: FIBRINOUS

Mammary Gland

Cyst

Pituitary Gland

Pars Distalis

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 223

TRT#: 1

SEX: Male

DAY ON TEST: 534

DOSE: CONTROL

DISP: Dead

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
Larynx	Lymph Node - Mandibular	Lymph Node - Mesenteric	Pancreas
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Eye	Harderian Gland	Lacrimal Gland	Mammary Gland
Nose	Pituitary Gland	Preputial Gland	Skeletal Muscle
Skin			

**OBSERVATIONS**

Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Minimal
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Fibrosis	Focal, Mild
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
Prostate		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 225

TRT#: 1

SEX: Male

DAY ON TEST: 373

DOSE: CONTROL

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Prostate  
Skin  
Testes

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Lymph Node - Mesenteric  
Salivary Glands  
Spleen  
Urinary Bladder

Bone  
Eye  
Intestine Small - Duodenum  
Pancreas  
Seminal Vesicle  
Stomach - Forestomach

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Preputial Gland  
Skeletal Muscle  
Stomach - Glandular

**MISSING**

Esophagus  
Larynx  
Mammary Gland  
Thymus

Harderian Gland  
Lung  
Nose  
Thyroid Gland

Heart  
Lymph Node - Bronchial  
Parathyroid Gland  
Trachea

Lacrimal Gland  
Lymph Node - Mandibular  
Pituitary Gland

**OBSERVATIONS**

Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver

Bile Duct

Nephropathy  
Hyperplasia

Minimal  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 226

TRT#: 1

SEX: Male

DAY ON TEST: 549

DOSE: CONTROL

DISP: Dead

HISTO: 82

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Mammary Gland	Skin
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Leukemia Mononuclear	
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 227

TRT#: 1

SEX: Male

DAY ON TEST: 732

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Salivary Glands	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Harderian Gland	Mammary Gland	Preputial Gland	Prostate
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Carcinoma	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Seminal Vesicle		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 227

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

**SEX:** Male  
**DISP:** Dead

**DAY ON TEST:** 732  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Tissue NOS

Inflammation  
Thrombosis

Acute, Mild

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 229

TRT#: 1

SEX: Male

DAY ON TEST: 373

DOSE: CONTROL

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Lacrimal Gland  
Pituitary Gland  
Skeletal Muscle  
Stomach - Glandular

Adrenal Gland - Medulla  
Eye  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Testes

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Nose  
Prostate  
Spleen  
Urinary Bladder

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Seminal Vesicle  
Stomach - Forestomach

**MISSING**

Esophagus  
Lung  
Parathyroid Gland

Harderian Gland  
Lymph Node - Bronchial  
Thymus

Heart  
Lymph Node - Mesenteric  
Thyroid Gland

Larynx  
Mammary Gland  
Trachea

**OBSERVATIONS**

Bone Marrow  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT

Liver  
Salivary Glands

Bile Duct  
Duct

Hyperplasia  
Nephropathy

Hyperplasia  
Metaplasia

Mild  
Moderate

Moderate  
Squamous, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 232

TRT#: 1

SEX: Male

DAY ON TEST: 516

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Prostate  
Skin  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Bone  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Seminal Vesicle  
Thymus

Brain  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Parathyroid Gland  
Skeletal Muscle  
Thyroid Gland

**MISSING**

Lymph Node - Mesenteric

Mammary Gland

Preputial Gland

**AUTO PRECLUDES DIAG.**

Testes

**OBSERVATIONS**

Bone Marrow  
Heart  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Lung  
Lymph Node  
Pituitary Gland  
Spleen  
Stomach

Alveolar Epith, Bronchiole  
Mandibular  
Pars Distalis  
Forestomach

Leukemia Mononuclear  
Cardiomyopathy  
Nephropathy  
Leukemia Mononuclear  
Hyperplasia  
Leukemia Mononuclear  
Adenoma  
Leukemia Mononuclear  
Ulcer

Minimal  
Minimal  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 233

TRT#: 1

SEX: Male

DAY ON TEST: 738

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Bone

Brain

Epididymis

Eye

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Lymph Node - Bronchial

Lymph Node - Mandibular

Lymph Node - Mesenteric

Nose

Pancreas

Salivary Glands

Seminal Vesicle

Skeletal Muscle

Skin

Stomach - Forestomach

Stomach - Glandular

Thymus

Urinary Bladder

**MISSING**

Esophagus

Harderian Gland

Larynx

Lung

Mammary Gland

Parathyroid Gland

Preputial Gland

Prostate

Thyroid Gland

Trachea

**OBSERVATIONS**

Adrenal Gland

Medulla

Hyperplasia

Mild

Bone Marrow

Leukemia Mononuclear

Heart

Cardiomyopathy

Moderate

Kidney

Nephropathy

Marked

Lacrimal GI

Note: LACRIMAL DUCT

Liver

Bile Duct

Hyperplasia

Marked

Leukemia Mononuclear

Pituitary Gland

Hyperplasia

Mild

Spleen

Leukemia Mononuclear

Testes

Interstit Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 234

TRT#: 1

SEX: Male

DAY ON TEST: 526

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Prostate  
Testes  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Seminal Vesicle  
Thymus

Bone  
Eye  
Intestine Large - Rectum  
Larynx  
Pancreas  
Stomach - Forestomach  
Thyroid Gland

Brain  
Harderian Gland  
Intestine Small - Duodenum  
Lymph Node - Bronchial  
Parathyroid Gland  
Stomach - Glandular  
Trachea

**MISSING**

Mammary Gland

Preputial Gland

Skeletal Muscle

Skin

**OBSERVATIONS**

Bone Marrow  
Heart  
Kidney  
Lacrimal Gland  
Note: LACRIMAL DUCT  
Liver  
Lung  
Lymph Node  
Pituitary Gland  
Salivary Glands  
Spleen  
Tissue NOS  
Note: POSSIBLE ZYMBAL'S GLAND

Bile Duct  
Mandibular

Leukemia Mononuclear  
Cardiomyopathy  
Nephropathy  
Inflammation  
Hyperplasia  
Squamous Cell Carcinoma  
Carcinoma  
Hyperplasia  
Carcinoma  
Leukemia Mononuclear  
Carcinoma

Mild  
Mild  
Acute, Mild  
Moderate  
Metastatic (Zymbal'S Gland)  
Mild  
Metastatic (Zymbal'S Gland)

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 235

TRT#: 1

SEX: Male

DAY ON TEST: 682

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Lymph Node - Mesenteric	Preputial Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
	Atrium	Mineralization	Mild
Kidney	Epithelium, Renal Tubule	Hyperplasia	Mild
		Nephropathy	Moderate
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Pituitary Gland		Leukemia Mononuclear	
Spleen		Infarct	Mild
		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 236

TRT#: 1

SEX: Male

DAY ON TEST: 738

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla

Bone

Brain

Esophagus

Eye

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Lymph Node - Bronchial

Lymph Node - Mesenteric

Nose

Seminal Vesicle

Skin

Stomach - Forestomach

Stomach - Glandular

Thymus

**MISSING**

Harderian Gland

Larynx

Lung

Lymph Node - Mandibular

Mammary Gland

Parathyroid Gland

Pituitary Gland

Preputial Gland

Prostate

Salivary Glands

Skeletal Muscle

Thyroid Gland

Trachea

Urinary Bladder

**OBSERVATIONS**

Adrenal Gland

Cortex

Hyperplasia

Focal, Mild

Bone Marrow

Leukemia Mononuclear

Epididymis

Hypospermia

Mild

Heart

Cardiomyopathy

Marked

Islets, Pancreatic

Carcinoma

Kidney

Nephropathy

Moderate

Lacrimal GI

Note: LACRIMAL DUCT

Liver

Bile Duct

Hepatocellular Adenoma

Hyperplasia

Moderate

Spleen

Leukemia Mononuclear

Testes

Interstit Cell

Leukemia Mononuclear

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 237

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Preputial Gland  
Stomach - Forestomach  
Urinary Bladder

Bone  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Salivary Glands  
Stomach - Glandular

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Parathyroid Gland  
Seminal Vesicle  
Thyroid Gland

Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pituitary Gland  
Skeletal Muscle  
Trachea

**MISSING**

Thymus

**OBSERVATIONS**

Adrenal Gland  
Bone Marrow  
Epididymis  
Heart  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Lung  
Lymph Node  
Mammary Gland  
Prostate  
Skin  
Spleen  
Testes

Medulla  
Bile Duct  
Hepatocyte  
Alveolar Epith, Bronchiole  
Mandibular  
Subcut Tiss  
Interstit Cell

Hyperplasia  
Leukemia Mononuclear  
Hypospermia  
Cardiomyopathy  
Nephropathy  
Degeneration  
Hyperplasia  
Hyperplasia  
Hyperplasia  
Leukemia Mononuclear  
Cyst  
Hyperplasia  
Lipoma  
Leukemia Mononuclear  
Adenoma

Mild  
Mild  
Moderate  
Moderate  
Cystic, Mild  
Moderate  
Mild  
Moderate  
Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 238

TRT#: 1

SEX: Male

DAY ON TEST: 614

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla

Bone

Brain

Esophagus

Eye

Harderian Gland

Lacrimal Gland

Larynx

Lung

Lymph Node - Bronchial

Lymph Node - Mesenteric

Nose

Pancreas

Parathyroid Gland

Pituitary Gland

Preputial Gland

Prostate

Seminal Vesicle

Skin

Stomach - Forestomach

Stomach - Glandular

Thyroid Gland

Trachea

Urinary Bladder

**MISSING**

Lymph Node - Mandibular

Mammary Gland

Salivary Glands

Skeletal Muscle

Thymus

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

**OBSERVATIONS**

Adrenal Gland

Cortex

Vacuolization Cytoplasmic

Moderate

Bone Marrow

Hyperplasia

Mild

Epididymis

Mesothelioma Malignant

Heart

Cardiomyopathy

Moderate

Kidney

Nephropathy

Minimal

Lacrimal GI

Note: LACRIMAL DUCT

Liver

Centrilobular

Necrosis

Mild

Mesentery

Mesothelioma Malignant

Spleen

Necrosis

Marked

Testes

Interstit Cell

Adenoma

Tunic

Mesothelioma Malignant

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 239

TRT#: 1

SEX: Male

DAY ON TEST: 787

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Parathyroid Gland
Preputial Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Harderian Gland	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Chronic Active, Moderate
Stomach	Forestomach	Acanthosis	Focal, Moderate
Testes		Degeneration	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 240

TRT#: 1

SEX: Male

DAY ON TEST: 726

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Nose	Parathyroid Gland	Preputial Gland	Prostate
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

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

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Moderate
Bone		Fibrous Histiocytoma	Metastatic (Skin)
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Fibrous Histiocytoma	Metastatic (Skin)
Lymph Node	Mesenteric	Fibrous Histiocytoma	Metastatic (Skin)
Pancreas	Acinus	Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Mild
Salivary Glands		Fibrous Histiocytoma	Metastatic (Skin)
Skeletal Muscle		Fibrous Histiocytoma	Metastatic (Skin)
Skin		Fibrous Histiocytoma	
Note: MALIGNANT			
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 241

TRT#: 1

SEX: Male

DAY ON TEST: 730

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland	Skeletal Muscle	Skin
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
Pancreas	Artery	Polyarteritis	Mild
Note: NODOSA			
Pituitary Gland	Pars Distalis	Adenoma	
Tissue NOS		Lipoma	
		Necrosis	Mild
Note: TISSUE NOS IS FAT			

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 242

TRT#: 1

SEX: Male

DAY ON TEST: 600

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Pancreas	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Moderate
Bone Marrow		Hyperplasia	Mild
Eye	Antr Chamber	Inflammation	Acute, Moderate
	Cornea	Necrosis	Moderate
Note: ULCERATION			
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
Nose		Fibrosarcoma	
Pituitary Gland	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 243

TRT#: 1

SEX: Male

DAY ON TEST: 373

DOSE: CONTROL

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Seminal Vesicle  
Stomach - Forestomach

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

Bone  
Eye  
Intestine Small - Duodenum  
Lymph Node - Mesenteric  
Preputial Gland  
Skin  
Testes

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Ileum  
Mammary Gland  
Prostate  
Spleen  
Urinary Bladder

**MISSING**

Esophagus  
Lymph Node - Bronchial  
Salivary Glands

Harderian Gland  
Lymph Node - Mandibular  
Thymus

Larynx  
Parathyroid Gland  
Thyroid Gland

Lung  
Pituitary Gland  
Trachea

**OBSERVATIONS**

Heart  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver

Bile Duct

Cardiomyopathy  
Nephropathy  
  
Hyperplasia  
Necrosis

Mild  
Mild  
  
Minimal  
Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 244

TRT#: 1

SEX: Male

DAY ON TEST: 787

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Mammary Gland	Nose	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Harderian Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Minimal
Kidney		Nephropathy	Moderate
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Pancreas		Atrophy	Mild
		Fibrosis	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 245

TRT#: 1

SEX: Male

DAY ON TEST: 373

DOSE: CONTROL

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

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

Lacrimal Gland

Lymph Node - Bronchial

Lymph Node - Mesenteric

Mammary Gland

Nose

Pancreas

Pituitary Gland

Preputial Gland

Prostate

Seminal Vesicle

Skeletal Muscle

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Testes

Urinary Bladder

**MISSING**

Heart

Larynx

Lung

Lymph Node - Mandibular

Parathyroid Gland

Salivary Glands

Thymus

Thyroid Gland

Trachea

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Lacrimal GI

Note: LACRIMAL DUCT

Liver

Bile Duct

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 246

TRT#: 1

SEX: Male

DAY ON TEST: 738

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Brain	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Lymph Node - Bronchial	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Pancreas
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus			

**MISSING**

Esophagus	Harderian Gland	Kidney	Larynx
Lung	Parathyroid Gland	Thyroid Gland	Trachea
Urinary Bladder			

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone		Fibrous Osteodystrophy	
		Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 247

TRT#: 1

SEX: Male

DAY ON TEST: 788

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Harderian Gland	Preputial Gland
-----------------	-----------------

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
Pancreas		Polyarteritis	Mild
Note: NODOSA			
Salivary Glands	Duct	Metaplasia	Squamous, Mild
Testes	Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 248

TRT#: 1

SEX: Male

DAY ON TEST: 745

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lung	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

MISSING

Harderian Gland	Parathyroid Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Adenoma	
	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	
Islets, Pancreatic		Hyperplasia	Mild
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Mammary Gland		Cyst	
Nose		Inflammation	Acute, Moderate
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
Testes		Degeneration	Mild
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 248

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 745

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 249

TRT#: 1

SEX: Male

DAY ON TEST: 712

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Bone  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Parathyroid Gland  
Seminal Vesicle  
Thymus

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Preputial Gland  
Skeletal Muscle  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Nose  
Prostate  
Skin  
Trachea

**MISSING**

Mammary Gland

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland  
Epididymis  
Heart  
  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
  
Lung  
Lymph Node  
  
Spleen  
Stomach  
Testes

Medulla  
  
Atrium  
  
Bile Duct  
  
Bronchial  
Mandibular  
Mesenteric  
  
Forestomach  
  
Tunic

Pheochromocytoma Benign  
Hypospermia  
Cardiomyopathy  
Thrombosis  
Nephropathy  
  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Ulcer  
Degeneration  
Mesothelioma Benign

Mild  
Moderate  
  
Marked  
  
Marked  
  
  
  
  
Moderate  
Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 249

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 712

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 250

TRT#: 1

SEX: Male

DAY ON TEST: 745

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Necrosis	Mild
Bone Marrow		Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Marked
		Mineralization	Mild
Kidney		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Nose		Inflammation	Acute, Mild
Pancreas		Atrophy	Mild
Parathyroid Gland		Adenoma	
Pituitary Gland		Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Stomach	Glandular	Mineralization	Moderate
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 251

TRT#: 1

SEX: Male

DAY ON TEST: 743

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Brain	Esophagus	Eye	Harderian Gland
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Lymph Node - Mesenteric	Nose	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Forestomach	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Preputial Gland	

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone		Fibrous Osteodystrophy	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
Lung	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Mammary Gland		Hyperplasia	Mild
Parathyroid Gland		Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
Stomach	Glandular	Mineralization	Mild
	Submucosa	Mineralization	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:59

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

**Lab:** NORTHROP

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**ANIMAL ID:** 251

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 743

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes

Interstit Cell

Adenoma

Degeneration

Mild

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 253

TRT#: 1

SEX: Male

DAY ON TEST: 653

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mandibular	Mammary Gland	Nose	Parathyroid Gland
Pituitary Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Preputial Gland

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Moderate
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 254

TRT#: 1

SEX: Male

DAY ON TEST: 586

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Pituitary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Minimal
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 255

TRT#: 1

SEX: Male

DAY ON TEST: 726

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
Nose		Inflammation	Acute, Mild
Pituitary Gland	Pars Distalis	Adenoma	
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 256

TRT#: 1

SEX: Male

DAY ON TEST: 656

DOSE: CONTROL

DISP: Dead

HISTO: 82

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lung
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Necrosis	Moderate
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Bronchial	Depletion Cellular	Mild
	Mandibular	Leukemia Mononuclear	
Nose		Inflammation	Acute, Mild
Pancreas		Atrophy	Mild
		Fibrosis	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	
Urinary Bladder		Calculus Micro Observation Only	
	Transit Epithe	Papilloma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 257

TRT#: 1

SEX: Male

DAY ON TEST: 743

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Pancreas	Parathyroid Gland	Preputial Gland
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Harderian Gland	Mammary Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Nose		Inflammation	Acute, Mild
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Leukemia Mononuclear	
	Forestomach	Ulcer	Mild
Testes	Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 257

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 743

**DOSE:** CONTROL

**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: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 259

TRT#: 1

SEX: Male

DAY ON TEST: 464

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Spleen  
Trachea

Bone  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Lymph Node - Mesenteric  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Nose  
Salivary Glands  
Stomach - Glandular

Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Pancreas  
Seminal Vesicle  
Thyroid Gland

MISSING

Mammary Gland  
Thymus

Preputial Gland

Skeletal Muscle

Skin

INSUFFICIENT TISSUE

Pituitary Gland

OBSERVATIONS

Adrenal Gland  
Bone Marrow  
Epididymis  
Heart

Cortex  
  
  
Atrium

Vacuolization Cytoplasmic  
Hyperplasia  
Hypospermia  
Cardiomyopathy  
Thrombosis  
Nephropathy

Moderate  
Mild  
Mild  
Moderate  
  
Moderate

Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver

Bile Duct

Hyperplasia  
Necrosis  
Degeneration

Moderate  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 260

TRT#: 1

SEX: Male

DAY ON TEST: 688

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Skeletal Muscle	Skin	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Salivary Glands	Thymus
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AUTO PRECLUDES DIAG.

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

OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Acute, Moderate
Seminal Vesicle		Inflammation	Acute, Moderate
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 261

TRT#: 1

SEX: Male

DAY ON TEST: 788

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Skeletal Muscle  
Stomach - Glandular  
Trachea

Bone  
Esophagus  
Intestine Large - Rectum  
Larynx  
Lymph Node - Mesenteric  
Prostate  
Skin  
Testes  
Urinary Bladder

Bone Marrow  
Eye  
Intestine Small - Ileum  
Lung  
Nose  
Salivary Glands  
Spleen  
Thymus

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Pancreas  
Seminal Vesicle  
Stomach - Forestomach  
Thyroid Gland

**MISSING**

Harderian Gland

Mammary Gland

Preputial Gland

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland  
Heart  
Intestine Small  
Note: VILLI  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver

Medulla  
Duodenum  
Bile Duct

Pheochromocytoma Benign  
Cardiomyopathy  
Necrosis  
Nephropathy  
Hyperplasia

Moderate  
Acute, Mild  
Marked  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 262

TRT#: 1

SEX: Male

DAY ON TEST: 610

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla  
Larynx  
Nose  
Skin

Bone  
Lung  
Parathyroid Gland  
Thyroid Gland

Esophagus  
Lymph Node - Mandibular  
Salivary Glands  
Trachea

Lacrimal Gland  
Lymph Node - Mesenteric  
Skeletal Muscle

MISSING

Eye  
Preputial Gland

Harderian Gland  
Thymus

Mammary Gland

Pancreas

AUTO PRECLUDES DIAG.

Bone Marrow  
Intestine Large - Rectum  
Kidney  
Stomach - Forestomach

Epididymis  
Intestine Small - Duodenum  
Prostate  
Stomach - Glandular

Intestine Large - Cecum  
Intestine Small - Ileum  
Seminal Vesicle  
Testes

Intestine Large - Colon  
Intestine Small - Jejunum  
Spleen  
Urinary Bladder

INSUFFICIENT TISSUE

Pituitary Gland

OBSERVATIONS

Adrenal Gland  
Brain  
Heart

Cortex

Vacuolization Cytoplasmic  
Necrosis  
Cardiomyopathy  
Leukemia Mononuclear

Mild  
Focal, Mild  
Moderate

Lacrimal GI  
Note: LACRIMAL DUCT

Liver

Bile Duct

Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear

Moderate

Lymph Node

Bronchial

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 263

TRT#: 1

SEX: Male

DAY ON TEST: 737

DOSE: CONTROL

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Salivary Glands  
Spleen

Bone  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Seminal Vesicle  
Stomach - Forestomach

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Preputial Gland  
Skeletal Muscle  
Stomach - Glandular

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Mammary Gland  
Prostate  
Skin  
Urinary Bladder

**MISSING**

Harderian Gland  
Lymph Node - Mesenteric  
Trachea

Larynx  
Parathyroid Gland

Lung  
Thymus

Lymph Node - Bronchial  
Thyroid Gland

**OBSERVATIONS**

Adrenal Gland  
Heart  
Kidney  
Lacrimal Gland  
Note: LACRIMAL DUCT  
Liver  
Pituitary Gland  
Testes

Medulla  
Bile Duct  
Pars Distalis  
Interstit Cell

Pheochromocytoma Benign  
Cardiomyopathy  
Nephropathy  
Granuloma  
Hyperplasia  
Adenoma  
Adenoma

Moderate  
Marked  
Focal, Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 264

TRT#: 1

SEX: Male

DAY ON TEST: 600

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Lacrimal Gland  
Parathyroid Gland  
Salivary Glands  
Testes  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Larynx  
Pituitary Gland  
Seminal Vesicle  
Thymus

Bone  
Eye  
Nose  
Preputial Gland  
Skeletal Muscle  
Thyroid Gland

Brain  
Harderian Gland  
Pancreas  
Prostate  
Skin  
Trachea

MISSING

Mammary Gland

AUTO PRECLUDES DIAG.

Intestine Large - Cecum  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Stomach - Forestomach

Intestine Small - Duodenum  
Stomach - Glandular

OBSERVATIONS

Bone Marrow  
Heart  
  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Lung  
Lymph Node  
  
Spleen

Atrium  
  
  
  
  
  
Bronchial  
Mandibular  
Mesenteric

Leukemia Mononuclear  
Cardiomyopathy  
Thrombosis  
Nephropathy  
  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Moderate  
  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 265

TRT#: 1

SEX: Male

DAY ON TEST: 673

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Harderian Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Kidney		Nephropathy	Minimal
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Degeneration	Cystic, Mild
Pituitary Gland	Pars Distalis	Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Tissue NOS		Fibrosarcoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 266

TRT#: 1

SEX: Male

DAY ON TEST: 551

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Kidney	Lacrimal Gland	Larynx	Lymph Node - Mesenteric
Mammary Gland	Nose	Pancreas	Parathyroid Gland
Prostate	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Lymph Node - Mandibular	Preputial Gland	Salivary Glands	Thymus
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OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Testes		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 267

TRT#: 1

SEX: Male

DAY ON TEST: 674

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Kidney
Lacrimal Gland	Larynx	Parathyroid Gland	Pituitary Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea		

**MISSING**

Lymph Node - Mandibular	Mammary Gland	Pancreas	Thymus
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**INSUFFICIENT TISSUE**

Urinary Bladder

**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Brain		Oligodendroglioma Benign	
Harderian Gland		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Nose		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 268

TRT#: 1

SEX: Male

DAY ON TEST: 705

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland

**OBSERVATIONS**

Brain		Adenoma	
Note: FROM COMPRESSION OF PITUITARY TUMOR			
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 269

TRT#: 1

SEX: Male

DAY ON TEST: 761

DOSE: CONTROL

DISP: Dead

HISTO: 82

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Forestomach	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Hyperplasia	Mild
Heart		Cardiomyopathy	Marked
		Mineralization	Mild
Kidney		Nephropathy	Marked
Lacrimal Gland			
Note: LACRIMAL DUCT			
Larynx		Inflammation	Acute, Mild
Liver	Bile Duct	Hyperplasia	Moderate
Lung		Fibrosis	Mild
Note: ALVEOLAR THICKENING			
Lymph Node	Bronchial	Carcinoma	Metastatic (Parathyroid Gland)
Pancreas		Fibrosis	Moderate
Parathyroid Gland		Carcinoma	
Pituitary Gland		Hyperplasia	Mild
Stomach	Glandular	Mineralization	Marked
Testes	Interstit Cell	Adenoma	
Tongue		Necrosis	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 269

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 761

**DOSE:** CONTROL

**DISP:** Dead

**HISTO:** 82

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 270

TRT#: 1

SEX: Male

DAY ON TEST: 582

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Kidney	Lacrimal Gland	Larynx	Lung
Lymph Node - Mandibular	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Harderian Gland	Thymus
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AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 271

TRT#: 1

SEX: Male

DAY ON TEST: 373

DOSE: CONTROL

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Seminal Vesicle  
Testes

Adrenal Gland - Medulla  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Spleen  
Urinary Bladder

Epididymis  
Intestine Large - Rectum  
Kidney  
Preputial Gland  
Stomach - Forestomach

Eye  
Intestine Small - Duodenum  
Liver  
Prostate  
Stomach - Glandular

**MISSING**

Bone  
Harderian Gland  
Lung  
Nose  
Skeletal Muscle  
Trachea

Bone Marrow  
Heart  
Lymph Node - Bronchial  
Parathyroid Gland  
Skin

Brain  
Lacrimal Gland  
Lymph Node - Mandibular  
Pituitary Gland  
Thymus

Esophagus  
Larynx  
Mammary Gland  
Salivary Glands  
Thyroid Gland

**OBSERVATIONS**

Lacrimal GI  
Note: LACRIMAL DUCT

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 272

TRT#: 1

SEX: Male

DAY ON TEST: 568

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Trachea

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Mesenteric  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Bone  
Eye  
Intestine Small - Duodenum  
Larynx  
Nose  
Salivary Glands  
Stomach - Glandular

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Parathyroid Gland  
Seminal Vesicle  
Thyroid Gland

MISSING

Harderian Gland

Mammary Gland

Skeletal Muscle

Thymus

INSUFFICIENT TISSUE

Pituitary Gland

OBSERVATIONS

Bone Marrow  
Heart  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Lung  
Pancreas  
  
Spleen  
Testes

Interstit Cell

Leukemia Mononuclear  
Cardiomyopathy  
Nephropathy  
  
Leukemia Mononuclear  
Leukemia Mononuclear  
Atrophy  
Fibrosis  
Leukemia Mononuclear  
Adenoma

Moderate  
Moderate  
  
  
Moderate  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 273

TRT#: 1

SEX: Male

DAY ON TEST: 754

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lung	Lymph Node - Bronchial	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Trachea	Urinary Bladder

**MISSING**

Harderian Gland	Pituitary Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Minimal
Kidney		Nephropathy	Marked
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes		Degeneration	Mild
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 274

TRT#: 1

SEX: Male

DAY ON TEST: 499

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Larynx  
Nose  
Skin  
Trachea

Adrenal Gland - Medulla  
Eye  
Lung  
Parathyroid Gland  
Spleen

Bone  
Harderian Gland  
Lymph Node - Mesenteric  
Salivary Glands  
Thymus

Brain  
Lacrimal Gland  
Mammary Gland  
Seminal Vesicle  
Thyroid Gland

**MISSING**

Lymph Node - Bronchial  
Prostate

Lymph Node - Mandibular  
Skeletal Muscle

Pituitary Gland  
Urinary Bladder

Preputial Gland

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum  
Stomach - Glandular

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Pancreas

Intestine Small - Duodenum  
Stomach - Forestomach

**OBSERVATIONS**

Bone Marrow  
Epididymis  
Heart  
Kidney  
Lacrimal GI  
Note: LACRIMAL DUCT  
Liver  
Testes

Atrium

Centrilobular

Hyperplasia  
Hypospermia  
Thrombosis  
Nephropathy  
  
Necrosis  
Degeneration

Mild  
Mild  
  
Mild  
  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 275

TRT#: 1

SEX: Male

DAY ON TEST: 625

DOSE: CONTROL

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Kidney
Lacrimal Gland	Larynx	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Seminal Vesicle
Spleen	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Lymph Node - Mandibular	Mammary Gland	Preputial Gland	Salivary Glands
Skeletal Muscle	Skin		

**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Leukemia Mononuclear	
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Testes		Degeneration	Mild
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 276

TRT#: 1

SEX: Male

DAY ON TEST: 653

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Bone Marrow	Brain
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mesenteric	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

MISSING

Harderian Gland	Lymph Node - Mandibular	Salivary Glands
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OBSERVATIONS

Adrenal Gland	Cortex	Adenoma	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Minimal
Kidney		Metaplasia	Osseous, Mild
		Nephropathy	Moderate
		Sarcoma	
Lacrimal Gland			
Note: LACRIMAL DUCT			
Liver		Necrosis	Focal, Mild
Stomach	Forestomach	Ulcer	Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 278

TRT#: 1

SEX: Male

DAY ON TEST: 698

DOSE: CONTROL

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Harderian Gland	Heart
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mesenteric	Nose	Parathyroid Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Thymus	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Lymph Node - Mandibular	Mammary Gland	Salivary Glands	Stomach - Forestomach
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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	Stomach - Glandular	

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Epididymis		Hypospermia	Mild
Islets, Pancreatic		Carcinoma	
Kidney		Nephropathy	Moderate
Lacrimal GI			
Note: LACRIMAL DUCT			
Liver	Bile Duct	Hyperplasia	Mild
Pituitary Gland	Pars Distalis	Adenoma	
Preputial Gland		Carcinoma	
Testes	Interstit Cell	Adenoma	
		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 301

TRT#: 3

SEX: Male

DAY ON TEST: 722

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Harderian Gland	Lung	Lymph Node - Bronchial
Nose	Parathyroid Gland	Preputial Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Spleen	Stomach - Forestomach
Trachea			

**MISSING**

Lacrimal Gland	Larynx	Lymph Node - Mandibular	Lymph Node - Mesenteric
Mammary Gland	Pituitary Gland	Salivary Glands	Skin
Thymus			

**AUTO PRECLUDES DIAG.**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Pancreas	Stomach - Glandular	Tissue NOS	Urinary Bladder

**OBSERVATIONS**

Eye		Cataract	Marked
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
Testes	Interstit Cell	Adenoma	
Thyroid Gland	Follicular Cel	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 302

TRT#: 3

SEX: Male

DAY ON TEST: 621

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Epididymis	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Jejunum	Larynx	Mammary Gland	Nose
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Seminal Vesicle	Thymus	Thyroid Gland	Urinary Bladder

MISSING

Bone	Bone Marrow	Lymph Node - Mandibular	Lymph Node - Mesenteric
Salivary Glands			

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Intestine Large	Colon	Necrosis	Mild
	Colon	Ulcer	Focal, Mild
Intestine Small	Ileum, Mucosa	Dilatation	Mild
	Ileum	Hyperplasia	Focal, Mild
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Minimal
Lacrimal Gland		Dilatation	Moderate
Liver		Leukemia Mononuclear	
	Hepatocyte	Vacuolization Cytoplasmic	Moderate
Lung	Interstitialium	Fibrosis	Multifocal, Mild
Lymph Node	Bronchial	Ectasia	Moderate
		Ectasia	Moderate
Pancreas		Atrophy	Focal, Mild
Skin		Ulcer	Minimal
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Hyperkeratosis	Mild
	Forestomach	Hyperplasia	Mild
Testes		Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 302

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 621

**DOSE:** 10 MG/M3 12 MO

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 303

TRT#: 3

SEX: Male

DAY ON TEST: 683

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Salivary Glands  
Thyroid Gland

Adrenal Gland - Medulla  
Eye  
Intestine Large - Rectum  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Trachea

Bone  
Harderian Gland  
Intestine Small - Duodenum  
Mammary Gland  
Preputial Gland  
Skin  
Urinary Bladder

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

**OBSERVATIONS**

Bone Marrow  
Epididymis  
Heart  
Kidney  
Lacrimal Gland  
Larynx  
Liver  
  
Lymph Node  
  
Pituitary Gland  
Spleen  
Stomach  
Testes  
Thymus

Bronchial, Mandibular  
Mesenteric  
Pars Distalis  
  
Forestomach  
Interstit Cell

Hypercellularity  
Hypospermia  
Cardiomyopathy  
Nephropathy  
Inflammation  
Inflammation  
Leukemia Mononuclear  
Necrosis  
Ectasia  
Ectasia  
Cyst  
Leukemia Mononuclear  
Hyperkeratosis  
Adenoma  
Atrophy

Moderate  
  
Mild  
Mild  
Moderate  
Mild  
  
Marked  
Mild  
Moderate  
  
Moderate  
  
Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 305

TRT#: 3

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3 12 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Bone

Brain

Epididymis

Eye

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Lymph Node - Bronchial

Lymph Node - Mesenteric

Nose

Preputial Gland

Prostate

Salivary Glands

Seminal Vesicle

Skeletal Muscle

Skin

Stomach - Forestomach

Stomach - Glandular

Thymus

Urinary Bladder

MISSING

Harderian Gland

Larynx

Lung

Parathyroid Gland

Thyroid Gland

Trachea

OBSERVATIONS

Adrenal Gland

Medulla

Hyperplasia

Mild

Bone Marrow

Hypercellularity

Marked

Esophagus

Hyperkeratosis

Mild

Hyperplasia

Mild

Heart

Cardiomyopathy

Moderate

Kidney

Nephropathy

Moderate

Liver

Degeneration

Mild

Bile Duct

Hyperplasia

Moderate

Leukemia Mononuclear

Lymph Node

Mandibular

Leukemia Mononuclear

Mammary Gland

Hemorrhage

Moderate

Pancreas

Hyperplasia

Mild

Pituitary Gland

Pars Distalis

Adenoma

Spleen

Leukemia Mononuclear

Testes

Interstit Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 307

TRT#: 3

SEX: Male

DAY ON TEST: 586

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Stomach - Forestomach	Stomach - Glandular	Testes	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Hypercellularity	Marked
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver		Hyperplasia	Marked
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Skin		Papilloma	
Spleen		Leukemia Mononuclear	
Thymus		Atrophy	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 309

TRT#: 3

SEX: Male

DAY ON TEST: 724

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Lung  
Parathyroid Gland  
Skeletal Muscle  
Stomach - Glandular  
Urinary Bladder

Bone  
Eye  
Lymph Node - Bronchial  
Preputial Gland  
Skin  
Thymus

Bone Marrow  
Intestine Large - Rectum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Thyroid Gland

Brain  
Larynx  
Mammary Gland  
Seminal Vesicle  
Stomach - Forestomach  
Trachea

**MISSING**

Adrenal Gland - Medulla  
Salivary Glands

Harderian Gland

Lacrimal Gland

Lymph Node - Mandibular

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Jejunum

Intestine Large - Colon

Intestine Small - Duodenum

Intestine Small - Ileum

**OBSERVATIONS**

Epididymis  
Heart

Atrium

Hypospermia  
Cardiomyopathy

Moderate

Kidney  
Liver  
Nose  
Pancreas  
Pituitary Gland  
Testes

Interstit Cell

Thrombosis  
Nephropathy  
Hyperplasia  
Inflammation  
Atrophy  
Hyperplasia  
Adenoma

Minimal  
Marked  
Moderate  
Moderate  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 311

TRT#: 3

SEX: Male

DAY ON TEST: 745

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Hypercellularity	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Kidney		Abscess	Mild
		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
Skin		Cyst Epithelial Inclusion	Moderate
Spleen		Ectasia	Moderate
Testes	Interstit Cell	Adenoma	
Tissue NOS			

Note: NEUROLEMOMA

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 313

TRT#: 3

SEX: Male

DAY ON TEST: 754

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Tongue	Trachea	Urinary Bladder

MISSING

Thymus

PRESENT BUT NOT EXAMINED

Larynx

OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Hypercellularity	Moderate
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung	Alveolar Epith	Hyperplasia	Focal, Mild
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 314

TRT#: 3

SEX: Male

DAY ON TEST: 743

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Larynx  
Parathyroid Gland  
Thymus

Adrenal Gland - Medulla  
Esophagus  
Lymph Node - Bronchial  
Preputial Gland  
Thyroid Gland

Bone  
Harderian Gland  
Lymph Node - Mandibular  
Salivary Glands  
Trachea

Brain  
Lacrimal Gland  
Lymph Node - Mesenteric  
Stomach - Forestomach  
Urinary Bladder

**MISSING**

Eye

Mammary Gland

Skeletal Muscle

Skin

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum  
Seminal Vesicle

Intestine Large - Colon  
Intestine Small - Jejunum  
Stomach - Glandular

Intestine Large - Rectum  
Nose

Intestine Small - Duodenum  
Pancreas

**OBSERVATIONS**

Bone Marrow  
Heart  
Kidney  
Liver

Hypercellularity  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear

Moderate  
Moderate  
Moderate  
Moderate

Lung

Alveolus, Bronchiole

Hyperplasia  
Osteosarcoma

Focal, Mild  
Metastatic (Tissue Nos)

Pituitary Gland

Adenoma

Prostate

Hyperplasia

Focal, Moderate

Spleen

Leukemia Mononuclear

Testes

Interstit Cell

Adenoma

Tissue NOS

Sarcoma

Note: SARCOMA WITH OSTEOID DIFFERENTIATION.

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 315

TRT#: 3

SEX: Male

DAY ON TEST: 781

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Salivary Glands  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Preputial Gland  
Skeletal Muscle  
Thymus

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Prostate  
Skin  
Trachea

MISSING

Mammary Gland

OBSERVATIONS

Bone Marrow  
Epididymis  
Eye

Heart  
Kidney  
Liver

Lung  
Lymph Node  
Pancreas  
Pituitary Gland  
Spleen  
Testes  
Thyroid Gland

Bile Duct

Mesenteric

Interstit Cell

Leukemia Mononuclear  
Hypospermia  
Cataract  
Degeneration  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Ectasia  
Atrophy  
Adenoma  
Leukemia Mononuclear  
Adenoma  
Cyst

Moderate  
Moderate  
Mild  
Moderate  
Marked  
  
Moderate  
Mild  
  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 316

TRT#: 3

SEX: Male

DAY ON TEST: 690

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Lacrimal Gland
Larynx	Lymph Node - Mandibular	Nose	Pituitary Gland
Salivary Glands	Thyroid Gland	Trachea	

**MISSING**

Adrenal Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Kidney
Liver	Lymph Node - Mesenteric	Mammary Gland	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Urinary Bladder		

**OBSERVATIONS**

Heart		Cardiomyopathy	Mild
Lung	Interstitial	Fibrosis	Focal, Minimal
		Squamous Cell Carcinoma	Metastatic (Skin)
Lymph Node	Bronchial	Angiectasis	Moderate
Skin		Squamous Cell Carcinoma	
Note: IN OSSEOUS FORMATION			
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 317

TRT#: 3

SEX: Male

DAY ON TEST: 771

DOSE: 10 MG/M3 12 MO

DISP: Dead

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	Lacrimal Gland	Larynx
Lung	Nose	Preputial Gland	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Mammary Gland	Skeletal Muscle
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Hypocellularity	Moderate
Epididymis		Hypospermia	
Eye		Degeneration	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Hyperplasia	Mild
		Nephropathy	Marked
Liver		Degeneration	Moderate
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Hyperplasia	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Moderate
Spleen		Leukemia Mononuclear	
Stomach	Glandular, Mucosa	Mineralization	Moderate
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 317

**TRT#:** 3  
**DOSE:** 10 MG/M3 12 MO

**SEX:** Male  
**DISP:** Dead

**DAY ON TEST:** 771  
**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 318

TRT#: 3

SEX: Male

DAY ON TEST: 504

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mesenteric	Nose	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea			

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Bone Marrow		Hypercellularity	Moderate
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Hyperplasia	Mild
Kidney		Nephropathy	Minimal
Liver		Leukemia Mononuclear	
Lung	Alveolus	Hyperplasia	Focal, Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
Pancreas	Acinus	Hyperplasia	Mild
Pituitary Gland		Adenoma	
	Pars Intermed	Hyperplasia	Mild
Preputial Gland		Carcinoma	
Skin		Squamous Cell Papilloma	
Spleen		Leukemia Mononuclear	
Urinary Bladder		Calculus Micro Observation Only	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 319

TRT#: 3

SEX: Male

DAY ON TEST: 767

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Harderian Gland	Lacrimal Gland	Larynx
Nose	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

MISSING

Mammary Gland	Thymus
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AUTO PRECLUDES DIAG.

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

OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Nos	
Bone Marrow		Hyperplasia	Mild
Epididymis		Hypospermia	Marked
Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Minimal
Kidney		Hyperplasia	Mild
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Skin		Hyperkeratosis	Minimal
		Parakeratosis	Moderate
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 319

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 767

**DOSE:** 10 MG/M3 12 MO

**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: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 320

TRT#: 3

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3 12 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Nose	Prostate
Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach	Stomach - Glandular
Urinary Bladder			

MISSING

Harderian Gland	Larynx	Lung	Lymph Node - Bronchial
Parathyroid Gland	Preputial Gland	Salivary Glands	Skin
Thymus	Thyroid Gland	Trachea	

OBSERVATIONS

Adrenal Gland	Cortex	Hyperplasia	Mild
	Medulla	Hyperplasia	Mild
Bone Marrow		Hypercellularity	Mild
Epididymis		Hypospermia	
Eye		Degeneration	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland		Fibroadenoma	
Pancreas		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 321

TRT#: 3

SEX: Male

DAY ON TEST: 745

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Eye  
Intestine Large - Rectum  
Larynx  
Prostate  
Stomach - Glandular

Bone  
Harderian Gland  
Intestine Small - Ileum  
Pancreas  
Salivary Glands  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Parathyroid Gland  
Seminal Vesicle  
Trachea

Esophagus  
Intestine Large - Colon  
Lacrimal Gland  
Preputial Gland  
Stomach - Forestomach

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland  
Bone Marrow  
Epididymis  
Heart

Medulla

Pheochromocytoma Nos  
Hypercellularity  
Hypospermia  
Cardiomyopathy

Marked

Intestine Small  
Kidney

Atrium  
Duodenum  
Epithelium, Pelvis

Thrombosis  
Ulcer  
Hyperplasia

Mild

Mild

Mild

Moderate

Liver

Bile Duct

Nephropathy  
Degeneration  
Hyperplasia

Marked

Cystic, Moderate

Marked

Lung  
Lymph Node

Mesenteric  
Bronchial  
Mandibular

Leukemia Mononuclear  
Leukemia Mononuclear  
Ectasia

Mild

Nose  
Pituitary Gland  
Skin

Leukemia Mononuclear  
Leukemia Mononuclear  
Inflammation

Mild

Spleen

Adenoma  
Adenoma  
Cyst  
Keratoacanthoma  
Leukemia Mononuclear

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:59

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

**Lab:** NORTHROP

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**ANIMAL ID:** 321

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 745

**DOSE:** 10 MG/M3 12 MO

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Testes	Interstitial Cell	Adenoma
Thymus		Leukemia Mononuclear
Urinary Bladder		Leukemia Mononuclear

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 322

TRT#: 3

SEX: Male

DAY ON TEST: 723

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Brain	Esophagus	Eye	Harderian Gland
Intestine Small - Duodenum	Lacrimal Gland	Lung	Lymph Node - Bronchial
Pancreas	Salivary Glands	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Larynx	Seminal Vesicle	Thymus	
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**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Ileum
Intestine Small - Jejunum	Preputial Gland	Prostate	

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone		Hypertrophy	Moderate
Bone Marrow		Hypercellularity	Moderate
Epididymis		Degeneration	Moderate
Heart		Cardiomyopathy	Moderate
Kidney	Epithelium, Pelvis	Hyperplasia	Marked
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
Lymph Node	Mandibular, Mesenteric	Hyperplasia	Mild
	Pancreatic	Mineralization	Moderate
Mammary Gland		Cyst	
Nose		Inflammation	Mild
Parathyroid Gland		Hyperplasia	Marked
Pituitary Gland		Adenoma	
Stomach	Glandular, Mucosa	Mineralization	Mild
Testes	Interstit Cell	Adenoma	
Tissue NOS		Abscess	Moderate
Tongue		Hyperplasia	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 322

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 723

**DOSE:** 10 MG/M3 12 MO

**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: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 324

TRT#: 3

SEX: Male

DAY ON TEST: 691

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Esophagus	Eye
Harderian Gland	Lacrimal Gland	Nose	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Thymus	Urinary Bladder	

**MISSING**

Adrenal Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Kidney
Liver	Lymph Node - Mesenteric	Mammary Gland	Pancreas
Preputial Gland	Spleen	Stomach - Forestomach	Stomach - Glandular

**AUTO PRECLUDES DIAG.**

Larynx	Trachea
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**OBSERVATIONS**

Bone Marrow		Hypercellularity	Marked
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Testes	Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 325

TRT#: 3

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Seminal Vesicle  
Stomach - Forestomach  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Parathyroid Gland  
Skeletal Muscle  
Stomach - Glandular

Bone  
Eye  
Intestine Small - Duodenum  
Larynx  
Prostate  
Skin  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lung  
Salivary Glands  
Spleen  
Trachea

**MISSING**

Harderian Gland  
Thymus

Mammary Gland

Pituitary Gland

Preputial Gland

**OBSERVATIONS**

Bone Marrow  
Heart  
Islets, Pancreatic  
Kidney  
Liver  
Pancreas  
Testes

Bile Duct

Interstit Cell

Hypercellularity  
Cardiomyopathy  
Adenoma  
Nephropathy  
Hyperplasia  
Atrophy  
Adenoma

Mild  
Mild  
Minimal  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 326

TRT#: 3

SEX: Male

DAY ON TEST: 747

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric
Mammary Gland	Nose	Pancreas	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Thymus	Trachea
Urinary Bladder			

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Hypercellularity	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Degeneration	Moderate
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung	Alveolus	Hyperplasia	Minimal
	Interstitialium	Mineralization	Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
Parathyroid Gland		Hyperplasia	Marked
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Stomach	Glandular, Mucosa	Mineralization	Moderate
Testes	Interstitial Cell	Adenoma	
Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 328

TRT#: 3

SEX: Male

DAY ON TEST: 739

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Nose	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Skeletal Muscle	Skin	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Intestine Small	Duodenum	Inflammation	Mild
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung	Alveolus	Fibrosis	Moderate
		Hyperplasia	Mild
		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland		Cyst	Multiple
Pancreas		Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Seminal Vesicle		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Inflammation	Acute, Mild
Testes		Atrophy	Moderate
Thyroid Gland	Follicular Cel	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:31:59  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 328

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 739

**DOSE:** 10 MG/M3 12 MO

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Tissue NOS

Leukemia Mononuclear

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:31:59

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

**Lab:** NORTHROP

**ANIMAL ID:** 329

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 373

**DOSE:** 10 MG/M3 12 MO

**DISP:** Interval Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Eye  
Intestine Large - Rectum  
Kidney  
Nose  
Seminal Vesicle  
Stomach - Glandular

Adrenal Gland - Medulla  
Harderian Gland  
Intestine Small - Duodenum  
Lacrimal Gland  
Pancreas  
Skeletal Muscle  
Testes

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Penis  
Spleen  
Urinary Bladder

Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Prostate  
Stomach - Forestomach

**MISSING**

Bone  
Larynx  
Mammary Gland  
Skin

Bone Marrow  
Lung  
Parathyroid Gland  
Thymus

Esophagus  
Lymph Node - Mandibular  
Preputial Gland  
Thyroid Gland

Heart  
Lymph Node - Mesenteric  
Salivary Glands  
Trachea

**INSUFFICIENT TISSUE**

Pituitary Gland

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 330

TRT#: 3

SEX: Male

DAY ON TEST: 747

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Eye	Harderian Gland
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Mammary Gland	Nose	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Stomach - Glandular	Thyroid Gland	Trachea	Urinary Bladder

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Moderate
Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Epididymis		Hypospermia	
Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Pancreas		Atrophy	Mild
Pituitary Gland		Cyst	Multiple
Skin		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Ulcer	Mild
Testes	Interstit Cell	Adenoma	
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 331

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Lacrimal Gland	Larynx	Lymph Node - Mandibular	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Malignant	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Intestine Small	Jejunum, Lymphoid Tiss	Hyperplasia	Mild
Islets, Pancreatic		Carcinoma	
Kidney		Nephropathy	Mild
Liver		Leukemia Mononuclear	
Lung		Pheochromocytoma Malignant	Metastatic (Adrenal Gland)
Lymph Node	Mesenteric	Leukemia Mononuclear	
	Bronchial	Pheochromocytoma Malignant	Metastatic (Adrenal Gland)
Pituitary Gland		Adenoma	
Prostate		Inflammation	Moderate
Spleen		Pheochromocytoma Malignant	Metastatic (Adrenal Gland)
Testes	Interstitial Cell	Adenoma	
Tissue NOS		Fibroma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 332

TRT#: 3

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric
Mammary Gland	Nose	Pancreas	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	Multiple
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung		Fibrosis	Minimal
Lymph Node	Mandibular	Hyperplasia	Minimal
Pituitary Gland		Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 333

TRT#: 3

SEX: Male

DAY ON TEST: 696

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Medulla	Bone	Brain	Esophagus
Harderian Gland	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Mammary Gland	Nose	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Epididymis	Lymph Node - Mesenteric	Preputial Gland	Thymus
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AUTO PRECLUDES DIAG.

Intestine Large - Cecum

OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Moderate
Bone Marrow		Leukemia Mononuclear	
Eye		Carcinoma	Metastatic (Zymbal'S Gland)
	Cornea	Necrosis	Marked
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung		Carcinoma	Metastatic (Zymbal'S Gland)
Lymph Node	Mandibular	Hyperplasia	Mild
Pancreas		Hyperplasia	Mild
Pituitary Gland		Carcinoma	Metastatic (Zymbal'S Gland)
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Zymbal's Gland		Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 334

TRT#: 3

SEX: Male

DAY ON TEST: 634

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Harderian Gland
Lacrimal Gland	Larynx	Lymph Node - Mandibular	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Trachea
Urinary Bladder			

MISSING

Preputial Gland	Thymus
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AUTO PRECLUDES DIAG.

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

INSUFFICIENT TISSUE

Pituitary Gland
-----------------

OBSERVATIONS

Adrenal Gland	Medulla	Mineralization	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
Lung		Carcinosarcoma	
Lymph Node	Bronchial	Angiectasis	Marked
	Mesenteric	Congestion	Mild
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 335

TRT#: 3

SEX: Male

DAY ON TEST: 766

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Larynx  
Nose  
Salivary Glands  
Spleen  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Lung  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Forestomach

Bone  
Harderian Gland  
Lymph Node - Bronchial  
Preputial Gland  
Skeletal Muscle  
Stomach - Glandular

Brain  
Lacrimal Gland  
Lymph Node - Mandibular  
Prostate  
Skin  
Trachea

**MISSING**

Lymph Node - Mesenteric

Mammary Gland

Thymus

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Pancreas

Intestine Small - Duodenum

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Bone Marrow  
Eye  
Heart  
Kidney  
Liver  
Testes  
Thyroid Gland

Interstit Cell

Hypercellularity  
Cataract  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Adenoma  
Cyst

Moderate  
Moderate  
Mild  
Moderate  
Moderate  
Multiple

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 336

TRT#: 3

SEX: Male

DAY ON TEST: 690

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Lacrimal Gland  
Lymph Node - Mandibular  
Pituitary Gland  
Skeletal Muscle  
Stomach - Glandular

Bone  
Esophagus  
Larynx  
Mammary Gland  
Prostate  
Skin  
Thyroid Gland

Bone Marrow  
Harderian Gland  
Lung  
Nose  
Salivary Glands  
Spleen  
Trachea

Brain  
Intestine Small - Duodenum  
Lymph Node - Bronchial  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Forestomach  
Urinary Bladder

**MISSING**

Lymph Node - Mesenteric

Thymus

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Jejunum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Ileum

**OBSERVATIONS**

Adrenal Gland  
Eye  
Heart  
Kidney  
Liver  
Pancreas  
Preputial Gland  
Testes

Medulla

Pheochromocytoma Nos  
Cataract  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Hyperplasia  
Inflammation  
Hyperplasia

Moderate  
Mild  
Moderate  
Moderate  
Mild  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 337

TRT#: 3

SEX: Male

DAY ON TEST: 586

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Liver
Lung	Lymph Node - Bronchial	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Spleen
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Skin	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Lymph Node	Mandibular, Mesenteric	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 338

TRT#: 3

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Pituitary Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Trachea	Urinary Bladder	

**MISSING**

Preputial Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Degeneration	Minimal
		Hyperplasia	Mild
Lung		Inflammation	Mild
Lymph Node	Mandibular	Hyperplasia	Mild
Testes	Interstitial Cell	Adenoma	
Thyroid Gland	Follicular Cell	Carcinoma	
Tissue NOS		Granuloma	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 339

TRT#: 3

SEX: Male

DAY ON TEST: 361

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Esophagus	Eye	Lacrimal Gland
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Skeletal Muscle	Skin		

**AUTO PRECLUDES DIAG.**

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

**OBSERVATIONS**

Epididymis	Necrosis	Marked
Note: NECROSIS IS SUPPURATIVE.		
Spleen	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 340

TRT#: 3

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

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	Lacrimal Gland
Larynx	Lung	Lymph Node - Bronchial	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Forestomach	Stomach - Glandular	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Harderian Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Moderate
Bone Marrow		Leukemia Mononuclear	
Eye		Cataract	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Hyperplasia	Moderate
		Nephropathy	Marked
Liver		Degeneration	Mild
		Leukemia Mononuclear	
Lymph Node	Mandibular, Mesenteric	Hyperplasia	Mild
Pituitary Gland		Angiectasis	Mild
		Hyperplasia	Mild
Prostate		Inflammation	Moderate
Spleen		Leukemia Mononuclear	
Testes		Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 341

TRT#: 3

SEX: Male

DAY ON TEST: 739

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Prostate  
Stomach - Forestomach  
Trachea

Bone  
Harderian Gland  
Lacrimal Gland  
Lymph Node - Mesenteric  
Salivary Glands  
Stomach - Glandular  
Urinary Bladder

Brain  
Intestine Small - Duodenum  
Larynx  
Mammary Gland  
Seminal Vesicle  
Thymus

Epididymis  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Preputial Gland  
Skeletal Muscle  
Thyroid Gland

**MISSING**

Parathyroid Gland

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Nose

**OBSERVATIONS**

Adrenal Gland  
Bone Marrow  
Eye  
Heart  
Kidney  
Liver

Bilateral, Medulla

Pheochromocytoma Nos  
Leukemia Mononuclear  
Cataract  
Cardiomyopathy  
Nephropathy  
Degeneration  
Leukemia Mononuclear  
Leukemia Mononuclear  
Hyperplasia  
Adenoma  
Keratoacanthoma  
Leukemia Mononuclear  
Adenoma

Moderate  
Moderate  
Marked  
Mild  
  
Mild

Lung  
Pancreas  
Pituitary Gland  
Skin  
Spleen  
Testes

Interstit Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 342

TRT#: 3

SEX: Male

DAY ON TEST: 745

DOSE: 10 MG/M3 12 MO

DISP: Dead

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
Lacrimal Gland	Larynx	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Spleen
Stomach - Glandular	Thymus	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Bronchial	Mammary Gland	Skeletal Muscle	Skin
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Mild
Eye		Cataract	Moderate
Heart		Cardiomyopathy	Moderate
Kidney		Hyperplasia	Mild
Liver		Degeneration	Mild
		Hyperplasia	Mild
Lung		Hyperplasia	Minimal
Pituitary Gland		Adenoma	
Stomach	Forestomach	Erosion	Moderate
	Forestomach	Hyperplasia	Mild
Testes	Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 343

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Preputial Gland	Salivary Glands	Seminal Vesicle
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea		

**MISSING**

Mammary Gland	Skeletal Muscle	Skin
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**OBSERVATIONS**

Adrenal Gland	Bilateral, Medulla Cortex	Pheochromocytoma Nos Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart	Atrium	Cardiomyopathy Thrombosis	Moderate
Kidney		Hyperplasia Nephropathy	Moderate Marked
Liver		Hyperplasia Leukemia Mononuclear	Marked
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial Mandibular	Ectasia Necrosis	Mild Moderate
Pancreas		Atrophy	Moderate
Pituitary Gland		Hyperplasia	Mild
Prostate		Inflammation	Moderate
Spleen		Leukemia Mononuclear	
Urinary Bladder		Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 344

TRT#: 3

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3 12 MO

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
Mammary Gland	Nose	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Urinary Bladder

**MISSING**

Harderian Gland	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mesenteric	Parathyroid Gland	Preputial Gland
Thymus	Thyroid Gland	Trachea	

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Degeneration	Mild
		Hyperplasia	Moderate
Lymph Node	Mandibular	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 345

TRT#: 3

SEX: Male

DAY ON TEST: 754

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Mammary Gland	Skeletal Muscle	Skin	Thymus
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**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Leukemia Mononuclear	
Eye		Cataract	Marked
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Degeneration	Mild
		Leukemia Mononuclear	
Lung		Hyperplasia	Mild
		Leukemia Mononuclear	
Pancreas		Atrophy	Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 346

TRT#: 3

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Bone

Brain

Esophagus

Harderian Gland

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Larynx

Lymph Node - Bronchial

Lymph Node - Mesenteric

Mammary Gland

Nose

Pancreas

Parathyroid Gland

Preputial Gland

Salivary Glands

Seminal Vesicle

Skeletal Muscle

Skin

Stomach - Forestomach

Stomach - Glandular

Testes

Thyroid Gland

Trachea

Urinary Bladder

MISSING

Thymus

OBSERVATIONS

Adrenal Gland

Bilateral, Medulla

Pheochromocytoma Nos

Bone Marrow

Leukemia Mononuclear

Epididymis

Hypospermia

Eye

Cataract

Moderate

Heart

Cardiomyopathy

Moderate

Kidney

Hyperplasia

Moderate

Liver

Nephropathy

Marked

Hyperplasia

Moderate

Lung

Leukemia Mononuclear

Lymph Node

Mandibular

Leukemia Mononuclear

Pituitary Gland

Hyperplasia

Mild

Prostate

Adenoma

Spleen

Inflammation

Moderate

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 348

TRT#: 3

SEX: Male

DAY ON TEST: 607

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Trachea
Urinary Bladder			

**MISSING**

Harderian Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Minimal
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Mineralization	Mild
		Nephropathy	Mild
Liver		Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Mammary Gland		Cyst	Multiple
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Thyroid Gland		Cyst	Multiple

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 349

TRT#: 3

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 12 MO

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
Lacrimal Gland	Larynx	Lung	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Parathyroid Gland
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Spleen
Stomach - Forestomach	Stomach - Glandular	Thymus	Trachea
Urinary Bladder			

MISSING

Harderian Gland	Preputial Gland
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OBSERVATIONS

Epididymis		Hypospermia	
Eye		Cataract	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Hyperplasia	Marked
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lymph Node	Bronchial	Hyperplasia	Mild
Pancreas		Atrophy	Minimal
Pituitary Gland		Hyperplasia	Mild
Prostate		Inflammation	Moderate
Skin	Epidermis	Cyst	
Note: EPIDERMAL INCLUSION CYST.			
Testes	Interstit Cell	Adenoma	
Thyroid Gland	C Cell	Adenoma	
	Follicular Cel	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 350

TRT#: 3

SEX: Male

DAY ON TEST: 373

DOSE: 10 MG/M3 12 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Intestine Large - Rectum  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

Epididymis  
Intestine Small - Duodenum  
Preputial Gland  
Skin  
Urinary Bladder

Intestine Large - Cecum  
Intestine Small - Ileum  
Prostate  
Spleen

Intestine Large - Colon  
Intestine Small - Jejunum  
Seminal Vesicle  
Stomach - Forestomach

**MISSING**

Bone  
Eye  
Larynx  
Mammary Gland  
Salivary Glands

Bone Marrow  
Harderian Gland  
Lung  
Nose  
Thymus

Brain  
Heart  
Lymph Node - Mandibular  
Parathyroid Gland  
Thyroid Gland

Esophagus  
Lacrimal Gland  
Lymph Node - Mesenteric  
Pituitary Gland  
Trachea

**OBSERVATIONS**

Adrenal Gland  
Kidney  
Liver  
Lymph Node  
Testes

Cortex  
Bile Duct  
Bronchial  
Interstit Cell

Hyperplasia  
Nephropathy  
Hyperplasia  
Hyperplasia  
Adenoma

Mild  
Mild  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 351

TRT#: 3

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3 12 MO

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	Lacrimal Gland
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Urinary Bladder		

**MISSING**

Harderian Gland	Larynx	Lung	Mammary Gland
Parathyroid Gland	Preputial Gland	Thymus	Thyroid Gland
Trachea			

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Moderate
Epididymis		Hypospermia	
Eye		Cataract	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Hyperplasia	Moderate
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 352

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 737

**DOSE:** 10 MG/M3 12 MO

**DISP:** Moribund

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Seminal Vesicle  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Intestine Small - Duodenum  
Lymph Node - Bronchial  
Pituitary Gland  
Skeletal Muscle

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mandibular  
Prostate  
Stomach - Forestomach

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

**MISSING**

Esophagus  
Lymph Node - Mesenteric  
Thymus

Harderian Gland  
Mammary Gland  
Thyroid Gland

Larynx  
Parathyroid Gland  
Trachea

Lung  
Preputial Gland

**OBSERVATIONS**

Eye  
Heart  
Kidney  
Liver

Cataract  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Leukemia Mononuclear  
Keratoacanthoma  
Leukemia Mononuclear  
Adenoma

Moderate  
Moderate  
Moderate  
Moderate

Skin  
Spleen  
Testes

Interstit Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 353

TRT#: 3

SEX: Male

DAY ON TEST: 625

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Esophagus	Harderian Gland	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Stomach - Forestomach	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Mammary Gland	Skeletal Muscle	Skin
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	
	Cortex	Vacuolization Cytoplasmic	Marked
Bone Marrow		Leukemia Mononuclear	
Brain		Inflammation	Marked
Epididymis		Hypospermia	
Eye		Cataract	Minimal
Heart		Inflammation	Moderate
Kidney		Mineralization	Marked
		Nephropathy	Marked
Liver	Hepatocyte	Vacuolization Cytoplasmic	Diffuse, Marked
Pancreas	Fat	Necrosis	Moderate
Spleen		Leukemia Mononuclear	
Stomach	Glandular, Mucosa	Mineralization	Marked
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 354

TRT#: 3

SEX: Male

DAY ON TEST: 627

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Lymph Node - Bronchial  
Parathyroid Gland  
Spleen  
Thymus

Adrenal Gland - Medulla  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Lymph Node - Mesenteric  
Preputial Gland  
Stomach - Forestomach  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Nose  
Prostate  
Stomach - Glandular  
Trachea

Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lung  
Pancreas  
Seminal Vesicle  
Testes  
Urinary Bladder

**MISSING**

Bone  
Salivary Glands

Bone Marrow  
Skeletal Muscle

Lymph Node - Mandibular  
Skin

Mammary Gland

**OBSERVATIONS**

Eye  
Heart  
Kidney  
Pituitary Gland

Cataract  
Cardiomyopathy  
Nephropathy  
Adenoma

Mild  
Moderate  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 355

TRT#: 3

SEX: Male

DAY ON TEST: 712

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Harderian Gland	Lacrimal Gland
Larynx	Liver	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Pancreas	Parathyroid Gland
Preputial Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Adrenal Gland - Medulla	Mammary Gland
-------------------------	---------------

**AUTO PRECLUDES DIAG.**

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

**OBSERVATIONS**

Eye		Cataract	Marked
		Inflammation	Moderate
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Nose		Inflammation	Moderate
Pituitary Gland		Adenoma	
Prostate		Inflammation	Mild
Stomach	Forestomach	Fibroma	
Tissue NOS		Inflammation	Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 356

TRT#: 3

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3 12 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Prostate  
Skin  
Urinary Bladder

Bone  
Intestine Large - Colon  
Intestine Small - Jejunum  
Mammary Gland  
Salivary Glands  
Spleen

Bone Marrow  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Seminal Vesicle  
Stomach - Forestomach

Brain  
Intestine Small - Duodenum  
Lymph Node - Mandibular  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

**MISSING**

Esophagus  
Lymph Node - Bronchial  
Thyroid Gland

Harderian Gland  
Parathyroid Gland  
Trachea

Larynx  
Preputial Gland

Lung  
Thymus

**OBSERVATIONS**

Adrenal Gland  
Epididymis  
Eye  
Heart  
Kidney  
Liver  
Pituitary Gland  
Testes

Medulla  
  
  
  
  
  
  
Interstit Cell

Pheochromocytoma Malignant  
Hypospermia  
Cataract  
Cardiomyopathy  
Nephropathy  
Degeneration  
Adenoma  
Adenoma

Moderate  
Moderate  
Moderate  
Minimal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 357

TRT#: 3

SEX: Male

DAY ON TEST: 373

DOSE: 10 MG/M3 12 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Intestine Large - Cecum  
Intestine Small - Ileum  
Preputial Gland  
Skin  
Testes

Adrenal Gland - Medulla  
Intestine Large - Colon  
Intestine Small - Jejunum  
Prostate  
Spleen  
Urinary Bladder

Epididymis  
Intestine Large - Rectum  
Liver  
Seminal Vesicle  
Stomach - Forestomach

Eye  
Intestine Small - Duodenum  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

**MISSING**

Bone  
Harderian Gland  
Lymph Node - Bronchial  
Nose  
Thymus

Bone Marrow  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Thyroid Gland

Brain  
Larynx  
Lymph Node - Mesenteric  
Pituitary Gland  
Trachea

Esophagus  
Lung  
Mammary Gland  
Salivary Glands

**OBSERVATIONS**

Heart  
Kidney

Cardiomyopathy  
Nephropathy

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 358

TRT#: 3

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Mammary Gland	Nose	Pancreas	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland	Preputial Gland
-----------------	-----------------

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Degeneration	Minimal
		Leukemia Mononuclear	
Lung		Hyperplasia	Moderate
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 359

TRT#: 3

SEX: Male

DAY ON TEST: 652

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Nose  
Thyroid Gland

Adrenal Gland - Medulla  
Esophagus  
Parathyroid Gland  
Trachea

Bone  
Lacrimal Gland  
Skeletal Muscle  
Urinary Bladder

Brain  
Larynx  
Stomach - Glandular

**MISSING**

Harderian Gland  
Pituitary Gland  
Seminal Vesicle

Lymph Node - Mandibular  
Preputial Gland  
Skin

Mammary Gland  
Prostate  
Thymus

Pancreas  
Salivary Glands

**AUTO PRECLUDES DIAG.**

Bone Marrow  
Intestine Small - Duodenum  
Lymph Node - Bronchial

Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric

Intestine Large - Colon  
Intestine Small - Jejunum  
Spleen

Intestine Large - Rectum  
Kidney

**OBSERVATIONS**

Eye  
Heart  
Liver

Hepatocyte

Cataract  
Cardiomyopathy  
Degeneration  
Hypertrophy  
Necrosis  
Hyperplasia  
Erosion  
Adenoma

Marked  
Moderate  
Moderate  
Marked  
Marked  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 360

TRT#: 3

SEX: Male

DAY ON TEST: 373

DOSE: 10 MG/M3 12 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Adrenal Gland - Medulla

Epididymis

Eye

Harderian Gland

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Kidney

Liver

Lymph Node - Mesenteric

Pancreas

Prostate

Seminal Vesicle

Skeletal Muscle

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Testes

Urinary Bladder

**MISSING**

Bone

Bone Marrow

Esophagus

Lacrimal Gland

Larynx

Lung

Lymph Node - Bronchial

Lymph Node - Mandibular

Mammary Gland

Nose

Parathyroid Gland

Preputial Gland

Salivary Glands

Thymus

Thyroid Gland

Trachea

**AUTO PRECLUDES DIAG.**

Brain

Pituitary Gland

**OBSERVATIONS**

Heart

Cardiomyopathy

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 361

TRT#: 3

SEX: Male

DAY ON TEST: 668

DOSE: 10 MG/M3 12 MO

DISP: Dead

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Mammary Gland	Nose	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Heart		Cardiomyopathy	Moderate
	Atrium	Thrombosis	
Kidney		Nephropathy	Moderate
Liver		Degeneration	Mild
		Hyperplasia	Marked
Lung		Hyperplasia	Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Hyperplasia	Mild
Parathyroid Gland		Adenoma	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 362

TRT#: 3

SEX: Male

DAY ON TEST: 780

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Larynx  
Nose  
Seminal Vesicle  
Stomach - Forestomach  
Thyroid Gland

Bone  
Esophagus  
Intestine Small - Duodenum  
Lymph Node - Bronchial  
Pancreas  
Skeletal Muscle  
Stomach - Glandular  
Trachea

Bone Marrow  
Intestine Large - Cecum  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Preputial Gland  
Skin  
Testes

Brain  
Intestine Large - Colon  
Lacrimal Gland  
Lymph Node - Mesenteric  
Salivary Glands  
Spleen  
Thymus

**MISSING**

Harderian Gland

Mammary Gland

**AUTO PRECLUDES DIAG.**

Intestine Small - Ileum

**OBSERVATIONS**

Adrenal Gland  
Eye  
Heart  
Kidney  
Liver  
Lung  
Parathyroid Gland  
Pituitary Gland  
Prostate  
Urinary Bladder

Medulla

Pheochromocytoma Nos  
Cataract  
Cardiomyopathy  
Nephropathy  
Degeneration  
Emphysema  
Hyperplasia  
Adenoma  
Inflammation  
Inflammation  
Mineralization

Marked  
Moderate  
Marked  
Moderate  
Moderate  
Marked  
Marked  
Mild  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 363

TRT#: 3

SEX: Male

DAY ON TEST: 373

DOSE: 10 MG/M3 12 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Rectum  
Kidney  
Prostate  
Stomach - Forestomach

Adrenal Gland - Medulla  
Eye  
Intestine Small - Duodenum  
Liver  
Seminal Vesicle  
Stomach - Glandular

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Pituitary Gland  
Skeletal Muscle  
Testes

Bone Marrow  
Intestine Large - Colon  
Intestine Small - Jejunum  
Preputial Gland  
Skin  
Urinary Bladder

**MISSING**

Brain  
Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Trachea

Esophagus  
Larynx  
Lymph Node - Mesenteric  
Salivary Glands

Harderian Gland  
Lung  
Mammary Gland  
Thymus

Heart  
Lymph Node - Bronchial  
Nose  
Thyroid Gland

**OBSERVATIONS**

Islets, Pancreatic  
Pancreas  
Spleen

Hyperplasia  
Atrophy  
Leukemia Mononuclear

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 364

TRT#: 3

SEX: Male

DAY ON TEST: 514

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Preputial Gland

**OBSERVATIONS**

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Minimal
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Inflammation	Minimal
Pituitary Gland		Adenoma	
Prostate		Inflammation	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 365

TRT#: 3

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mesenteric	Mammary Gland	Nose	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Preputial Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Marked
Liver		Degeneration	Mild
Lung		Atelectasis	Focal, Mild
Lymph Node	Mandibular	Hyperplasia	Mild
Pancreas		Fibrosis	Mild
		Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Moderate
Stomach	Forestomach	Inflammation	Mild
Note: GRANULOMATOUS INFLAMMATION.			
Testes	Interstit Cell	Adenoma	
		Hyperplasia	Mild
Note: MESOTHELIAL HYPERPLASIA.			
Tissue NOS		Fibrosarcoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 367

TRT#: 3

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Nose	Pancreas	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Preputial Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Nos	Multiple
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Degeneration	Mild
		Hyperplasia	Moderate
Lymph Node	Mesenteric	Hyperplasia	Mild
Mammary Gland		Adenoma	
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 368

TRT#: 3

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Malignant	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Adenoma	
		Hyperplasia	Moderate
		Pheochromocytoma Nos	Metastatic (Adrenal Gland)
Lung		Fibrosis	Mild
Spleen		Pheochromocytoma Nos	Metastatic (Adrenal Gland)
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:31:59

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 369

TRT#: 3

SEX: Male

DAY ON TEST: 716

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Larynx  
Parathyroid Gland  
Trachea

Adrenal Gland - Medulla  
Eye  
Lymph Node - Mandibular  
Pituitary Gland

Bone  
Harderian Gland  
Lymph Node - Mesenteric  
Skeletal Muscle

Brain  
Lacrimal Gland  
Nose  
Skin

**MISSING**

Epididymis  
Intestine Small - Duodenum  
Liver  
Prostate  
Stomach - Glandular

Intestine Large - Cecum  
Intestine Small - Ileum  
Mammary Gland  
Salivary Glands  
Testes

Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Seminal Vesicle  
Thymus

Intestine Large - Rectum  
Kidney  
Preputial Gland  
Stomach - Forestomach  
Urinary Bladder

**AUTO PRECLUDES DIAG.**

Thyroid Gland

**OBSERVATIONS**

Bone Marrow  
Heart

Atrium

Leukemia Mononuclear  
Cardiomyopathy  
Thrombosis

Moderate

Lung  
Lymph Node  
Spleen  
Tongue

Bronchial

Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Squamous Cell Papilloma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 370

TRT#: 3

SEX: Male

DAY ON TEST: 743

DOSE: 10 MG/M3 12 MO

DISP: Dead

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
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric
Nose	Parathyroid Gland	Preputial Gland	Skeletal Muscle
Skin	Stomach - Glandular	Thymus	Thyroid Gland
Trachea			

**MISSING**

Harderian Gland	Lymph Node - Mandibular	Mammary Gland	Salivary Glands
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Marked
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung		Fibrosis	Mild
		Hyperplasia	Mild
Lymph Node	Pancreatic	Leukemia Mononuclear	
Pancreas		Atrophy	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Mild
Seminal Vesicle		Inflammation	Mild
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Ulcer	Mild
Testes	Interstit Cell	Adenoma	
Urinary Bladder		Inflammation	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 371

TRT#: 3

SEX: Male

DAY ON TEST: 691

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lung	Nose
Preputial Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Trachea
Urinary Bladder			

MISSING

Thymus

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Nos	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
		Mineralization	Mild
	Atrium	Thrombosis	
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
	Central Vein	Thrombosis	
Lymph Node		Congestion	Mild
Mammary Gland		Inflammation	Marked
Pancreas		Atrophy	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Moderate
Spleen		Leukemia Mononuclear	
Testes		Atrophy	Marked
Thyroid Gland		Cyst	Multiple

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 372

TRT#: 3

SEX: Male

DAY ON TEST: 754

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Esophagus	Eye	Harderian Gland
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Nose	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Mammary Gland	Skeletal Muscle	Skin
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OBSERVATIONS

Adrenal Gland	Cortex Bilateral, Medulla	Adenoma Pheochromocytoma Nos	
Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
Kidney		Nephropathy	Moderate
Liver		Degeneration	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial Mandibular Mesenteric	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear	
Pancreas		Atrophy	Moderate
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Marked
		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thymus		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

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**ANIMAL ID:** 372

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 754

**DOSE:** 10 MG/M3 12 MO

**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: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 374

TRT#: 3

SEX: Male

DAY ON TEST: 373

DOSE: 10 MG/M3 12 MO

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Eye
Harderian Gland	Heart	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Liver	Lymph Node - Mesenteric	Mammary Gland
Nose	Pituitary Gland	Preputial Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Tongue	Urinary Bladder		

**MISSING**

Larynx	Lung	Lymph Node - Bronchial	Lymph Node - Mandibular
Parathyroid Gland	Salivary Glands	Thyroid Gland	Trachea

**OBSERVATIONS**

Kidney	Nephropathy	Mild
Pancreas	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

**ANIMAL ID:** 375

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:** 591

**DOSE:** 10 MG/M3 12 MO

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lacrimal Gland
Larynx	Liver	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**OBSERVATIONS**

Heart	Cardiomyopathy	Mild
Kidney	Nephropathy	Mild
Pancreas	Hyperplasia	Moderate
Pituitary Gland	Adenoma	

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 376

TRT#: 3

SEX: Male

DAY ON TEST: 641

DOSE: 10 MG/M3 12 MO

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Testes
Trachea	Urinary Bladder		

**MISSING**

Lymph Node - Mandibular	Salivary Glands	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pituitary Gland		Leukemia Mononuclear	
Thyroid Gland		Cyst	Multiple

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 377

TRT#: 3

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3 12 MO

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Liver	Lung
Lymph Node - Bronchial	Mammary Gland	Nose	Pancreas
Parathyroid Gland	Pituitary Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Trachea
Urinary Bladder			

**MISSING**

Harderian Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Thyroid Gland	Follicular Cel	Carcinoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 401

TRT#: 4

SEX: Male

DAY ON TEST: 719

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Epididymis
Esophagus	Harderian Gland	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Pancreas	Parathyroid Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Preputial Gland	Thymus
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**AUTO PRECLUDES DIAG.**

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

**OBSERVATIONS**

Adrenal Gland	Bilateral, Medulla Cortex	Pheochromocytoma Benign Vacuolization Cytoplasmic	Mild
Heart	Atrium	Cardiomyopathy Thrombosis	Mild
Intestine Large	Colon	Adenocarcinoma	
Kidney		Nephropathy	Marked
Liver	Bile Duct Centrilobular	Hyperplasia Necrosis	Moderate Moderate
Lung	Interstitialium Alveolar Epith, Bronchiole Bronchus, Epithelium	Alveolar/Bronchiolar Adenoma Fibrosis Hyperplasia Hyperplasia	Moderate Mild Focal, Moderate
Note: PROLIFERATION OF TYPE II PNEUMOCYTES			
Lymph Node	Pancreatic	Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Mild
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 402

TRT#: 4

SEX: Male

DAY ON TEST: 716

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Lacrimal Gland	Larynx
Nose	Parathyroid Gland	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mesenteric	Mammary 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	Stomach - Glandular	Testes

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
	Atrium	Thrombosis	
Islets, Pancreatic		Carcinoma	
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Moderate
Lung		Alveolar/Bronchiolar Carcinoma	Multiple
	Interstitium	Fibrosis	Moderate
Note: A/B CARCINOMA WITH SQUAMOUS CELL DIFFERENTIATION			
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Ulcer	Focal, Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:32:00  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 402

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 716

**DOSE:** 10 MG/M3ASBESTOS

**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: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 403

TRT#: 4

SEX: Male

DAY ON TEST: 387

DOSE: 10 MG/M3ASBESTOS

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Parathyroid Gland  
Skin  
Testes  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Prostate  
Spleen  
Thymus

Bone  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Seminal Vesicle  
Stomach - Glandular  
Trachea

**MISSING**

Harderian Gland

Lymph Node - Mesenteric

Mammary Gland

Preputial Gland

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Heart  
Kidney  
Liver  
Lung

Hepatocyte  
Interstitial

Cardiomyopathy  
Nephropathy  
Vacuolization Cytoplasmic  
Alveolar/Bronchiolar Adenoma  
Fibrosis

Mild  
Mild  
Moderate  
Marked

Note: PLANT MATERIAL PRESENT IN BRONCHIOLE

Skeletal Muscle

Rhabdomyosarcoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 404

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

Adrenal Gland - Medulla	Harderian Gland	Mammary Gland	Preputial Gland
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OBSERVATIONS

Adrenal Gland	Cortex	Vacuolization Cytoplasmic	Moderate
Bone		Fibrous Osteodystrophy	Focal
Eye	Cornea	Inflammation	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
Lung		Alveolar/Bronchiolar Carcinoma	
	Interstitialium	Fibrosis	Moderate
	Alveolus	Mineralization	Mild
Lymph Node	Mesenteric	Hemorrhage	Mild
Nose		Foreign Body	Mild
		Inflammation	Acute, Mild
Pancreas	Acinus	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 406

TRT#: 4

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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	Lacrimal Gland	Larynx	Pancreas
Parathyroid Gland	Pituitary Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Cortex	Hyperplasia	Focal, Mild
	Medulla	Pheochromocytoma Benign	
	Medulla	Pheochromocytoma Malignant	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Adenoma	
	Bronchiole	Carcinoma	
	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
		Metaplasia	Osseous, Focal, Mild
Note: BRONCHIOLAR CARCINOMA WITH SQUAMOUS DIFFERENTIATION			
Nose		Hemorrhage	Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 408

TRT#: 4

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO: 82

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Nose	Pancreas	Pituitary Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

OBSERVATIONS

Adrenal Gland	Medulla	Leukemia Mononuclear	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung	Interstitialium	Fibrosis	Moderate
	Alveolar Epith	Hyperplasia	Moderate
Lymph Node	Mesenteric	Hemorrhage	Mild
	Mandibular	Leukemia Mononuclear	
Mammary Gland		Cyst	
Parathyroid Gland		Adenoma	
Preputial Gland		Inflammation	Acute, Moderate
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 409

TRT#: 4

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Intestine Small - Ileum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric	Nose
Prostate	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Thymus
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Lymph Node - Mandibular	Mammary Gland	Salivary Glands
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**AUTO PRECLUDES DIAG.**

Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Jejunum	Thyroid Gland	

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Carcinoma	
Kidney	Cortex	Cyst	Mild
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Carcinoma	
	Interstitialium	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Moderate
Pancreas	Acinus	Atrophy	Focal, Mild
Parathyroid Gland		Hyperplasia	Mild
Preputial Gland		Hyperplasia	Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 410

TRT#: 4

SEX: Male

DAY ON TEST: 732

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone	Bone Marrow
Brain	Epididymis	Esophagus	Eye
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Pancreas	Salivary Glands	Seminal Vesicle	Testes
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland	Mammary Gland	Skeletal Muscle	Skin
Thymus			

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
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**OBSERVATIONS**

Heart		Cardiomyopathy	Marked
		Mineralization	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
Lung	Interstitialium	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
	Alveolus	Mineralization	Moderate
Lymph Node	Bronchial	Leukemia Mononuclear	
Parathyroid Gland		Adenoma	
Pituitary Gland		Adenoma	
Preputial Gland		Inflammation	Acute, Mild
Prostate		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	
Stomach	Forestomach, Submucosa	Mineralization	Marked
	Glandular, Submucosa	Mineralization	Marked

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 411

TRT#: 4

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3ASBESTOS

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Lymph Node - Mandibular	Nose	Pancreas
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Urinary Bladder		

**MISSING**

Esophagus	Harderian Gland	Larynx	Lung
Lymph Node - Bronchial	Lymph Node - Mesenteric	Parathyroid Gland	Thymus
Thyroid Gland	Trachea		

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
Mammary Gland		Cyst	
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 412

TRT#: 4

SEX: Male

DAY ON TEST: 565

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO: 83

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Lacrimal Gland  
Lymph Node - Mesenteric  
Salivary Glands  
Spleen  
Thyroid Gland

Adrenal Gland - Medulla  
Epididymis  
Larynx  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Forestomach  
Trachea

Bone  
Esophagus  
Lymph Node - Bronchial  
Preputial Gland  
Skeletal Muscle  
Stomach - Glandular  
Urinary Bladder

Bone Marrow  
Eye  
Lymph Node - Mandibular  
Prostate  
Skin  
Testes

**MISSING**

Harderian Gland

Pancreas

Thymus

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum  
Intestine Small - Ileum

Intestine Large - Colon  
Intestine Small - Jejunum

Intestine Large - Rectum  
Liver

Intestine Small - Duodenum

**OBSERVATIONS**

Heart  
Kidney  
Lung  
Mammary Gland  
Nose  
Pituitary Gland

Interstitialium

Cardiomyopathy  
Nephropathy  
Fibrosis  
Cyst  
Inflammation  
Adenoma

Moderate  
Moderate  
Mild  
Acute, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 413

TRT#: 4

SEX: Male

DAY ON TEST: 712

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Eye	Harderian Gland
Lacrimal Gland	Lymph Node - Bronchial	Lymph Node - Mandibular	Salivary Glands
Skeletal Muscle	Skin	Trachea	

**MISSING**

Esophagus	Larynx	Lymph Node - Mesenteric	Mammary Gland
Parathyroid Gland	Preputial Gland	Thymus	Thyroid Gland

**AUTO PRECLUDES DIAG.**

Bone Marrow	Epididymis	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Pancreas	Prostate	Seminal Vesicle	Stomach - Glandular
Urinary Bladder			

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart	Atrium	Thrombosis	
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
	Centrilobular	Necrosis	Moderate
Lung	Interstitial	Alveolar/Bronchiolar Carcinoma	
		Fibrosis	Mild
Nose		Inflammation	Acute, Mild
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Ulcer	Focal, Mild
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 414

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 374

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Interval Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Prostate  
Spleen  
Urinary Bladder

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Seminal Vesicle  
Stomach - Forestomach

Bone  
Eye  
Intestine Large - Rectum  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Preputial Gland  
Skin  
Testes

**MISSING**

Esophagus  
Lung  
Mammary Gland  
Salivary Glands

Heart  
Lymph Node - Bronchial  
Nose  
Thymus

Lacrimal Gland  
Lymph Node - Mandibular  
Parathyroid Gland  
Thyroid Gland

Larynx  
Lymph Node - Mesenteric  
Pituitary Gland  
Trachea

**OBSERVATIONS**

Kidney  
Liver

Bile Duct

Nephropathy  
Necrosis  
Proliferation

Mild  
Multifocal, Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 416

TRT#: 4

SEX: Male

DAY ON TEST: 781

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mandibular	Parathyroid Gland	Preputial Gland	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Skeletal Muscle
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Adenoma	
	Interstitialium	Fibrosis	Moderate
Nose		Inflammation	Acute, Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 417

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Harderian Gland	Thymus
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OBSERVATIONS

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Brain		Fibrous Histiocytoma	
Note: FIBROUS HISTIOCYTOMA IS MALIGNANT			
Heart		Cardiomyopathy	Mild
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver		Degeneration	Cystic, Focal, Mild
	Bile Duct	Hyperplasia	Mild
Lung	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Lymph Node	Mandibular	Hyperplasia	Mild
Mammary Gland		Cyst	
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland		Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 418

TRT#: 4

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3ASBESTOS

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Eye	Intestine Large - Cecum
Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Lacrimal Gland	Lymph Node - Mesenteric	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Stomach - Forestomach	Stomach - Glandular	Testes	Urinary Bladder

MISSING

Esophagus	Harderian Gland	Larynx	Lung
Lymph Node - Bronchial	Parathyroid Gland	Thymus	Thyroid Gland
Trachea			

OBSERVATIONS

Adrenal Gland	Cortex	Adenoma	
	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lymph Node	Mandibular	Leukemia Mononuclear	
Mammary Gland		Cyst	
Nose		Inflammation	Acute, Moderate
Pancreas	Acinus	Atrophy	Marked
Pituitary Gland		Adenoma	
Skin		Fibroma	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 419

TRT#: 4

SEX: Male

DAY ON TEST: 596

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Salivary Glands  
Stomach - Glandular  
Trachea

Adrenal Gland - Medulla  
Eye  
Intestine Small - Duodenum  
Larynx  
Parathyroid Gland  
Seminal Vesicle  
Testes  
Urinary Bladder

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Preputial Gland  
Skeletal Muscle  
Thymus

Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Prostate  
Stomach - Forestomach  
Thyroid Gland

**MISSING**

Harderian Gland

Lymph Node - Mesenteric

Mammary Gland

**OBSERVATIONS**

Bone Marrow  
Brain

Leukemia Mononuclear  
Hemorrhage  
Necrosis

Moderate  
Multifocal, Mild

Heart  
Kidney

Pelvis

Cardiomyopathy  
Inflammation  
Nephropathy

Moderate  
Acute, Mild  
Moderate

Liver  
Lung  
Lymph Node  
Pituitary Gland  
Skin  
Spleen

Interstitialium  
Mandibular

Leukemia Mononuclear  
Fibrosis  
Leukemia Mononuclear  
Adenoma  
Adenoma  
Leukemia Mononuclear

Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 420

TRT#: 4

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3ASBESTOS

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Mammary Gland  
Skeletal Muscle  
Testes

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Preputial Gland  
Skin  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Rectum  
Prostate  
Stomach - Forestomach

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Seminal Vesicle  
Stomach - Glandular

**MISSING**

Harderian Gland  
Lacrimal Gland  
Lymph Node - Bronchial  
Pancreas  
Thymus

Heart  
Larynx  
Lymph Node - Mandibular  
Parathyroid Gland  
Thyroid Gland

Intestine Small - Ileum  
Liver  
Lymph Node - Mesenteric  
Pituitary Gland  
Trachea

Intestine Small - Jejunum  
Lung  
Nose  
Salivary Glands

**OBSERVATIONS**

Kidney  
Spleen

Nephropathy  
Necrosis

Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 422

TRT#: 4

SEX: Male

DAY ON TEST: 789

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Mammary Gland	Nose
Pancreas	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mesenteric

**OBSERVATIONS**

Adrenal Gland	Medulla	Necrosis	Mild
	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	Multiple
	Interstitium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Lymph Node	Mandibular	Hyperplasia	Mild
Parathyroid Gland	Bilateral	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 423

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric	Mammary Gland
Nose	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
		Necrosis	Mild
Note: FAT NECROSIS			
Heart		Cardiomyopathy	Marked
		Mineralization	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung	Interstitium	Fibrosis	Moderate
Lymph Node	Mandibular	Leukemia Mononuclear	
Pancreas	Acinus	Hyperplasia	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Mild
Skin		Fibrosarcoma	
Spleen		Leukemia Mononuclear	
Testes		Degeneration	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

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**ANIMAL ID:** 423

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 787

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Tissue NOS	Fat	Necrosis	Mild
PRIMARY CAUSE OF DEATH	-		

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\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 424

TRT#: 4

SEX: Male

DAY ON TEST: 583

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Nose	Pancreas	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Mild
Liver		Leukemia Mononuclear	
Lung	Interstitial	Fibrosis	Mild
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Parathyroid Gland	Bilateral	Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Mild
		Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 426

TRT#: 4

SEX: Male

DAY ON TEST: 659

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Nose	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Stomach - Forestomach	Stomach - Glandular	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Mammary Gland	Pituitary 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	Pancreas	

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung	Interstitial	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Skin		Keratoacanthoma	
Spleen		Leukemia Mononuclear	
Testes	Interstitial Cell	Adenoma	
Tissue NOS		Necrosis	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 427

TRT#: 4

SEX: Male

DAY ON TEST: 747

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

Adrenal Gland - Medulla  
Eye  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Seminal Vesicle  
Stomach - Glandular  
Trachea

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Parathyroid Gland  
Skin  
Testes  
Urinary Bladder

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mandibular  
Preputial Gland  
Spleen  
Thymus

**MISSING**

Harderian Gland

Mammary Gland

Skeletal Muscle

**OBSERVATIONS**

Bone Marrow  
Epididymis  
Heart  
Kidney

Hyperplasia  
Hypospermia  
Cardiomyopathy  
Nephropathy  
Sarcoma

Mild  
Mild  
Mild  
Mild

Liver  
Lung

Bile Duct  
Interstitialium  
Alveolar Epith, Bronchiole

Hyperplasia  
Fibrosis  
Hyperplasia

Mild  
Moderate  
Mild

Lymph Node  
Pituitary Gland  
Prostate

Mesenteric

Hyperplasia  
Adenoma  
Inflammation

Mild  
Mild  
Acute, Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 428

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 649

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Pituitary Gland  
Skeletal Muscle  
Stomach - Glandular  
Urinary Bladder

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Nose  
Preputial Gland  
Skin  
Testes

Bone Marrow  
Eye  
Intestine Small - Duodenum  
Larynx  
Pancreas  
Prostate  
Spleen  
Thyroid Gland

Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Forestomach  
Trachea

**MISSING**

Harderian Gland  
Thymus

Lymph Node - Mandibular

Mammary Gland

Salivary Glands

**OBSERVATIONS**

Bone  
Heart  
Kidney  
Liver  
Lung

Bile Duct  
Interstitialium  
Alveolar Epith, Bronchiole

Osteoma  
Cardiomyopathy  
Nephropathy  
Hyperplasia  
Fibrosis  
Hyperplasia

Moderate  
Marked  
Mild  
Mild  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 429

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex

Bone

Brain

Esophagus

Eye

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Lacrimal Gland

Larynx

Lymph Node - Bronchial

Nose

Pancreas

Parathyroid Gland

Pituitary Gland

Prostate

Salivary Glands

Seminal Vesicle

Skeletal Muscle

Skin

Stomach - Forestomach

Stomach - Glandular

Thymus

Thyroid Gland

Trachea

Urinary Bladder

MISSING

Harderian Gland

Mammary Gland

Preputial Gland

OBSERVATIONS

Adrenal Gland

Medulla

Pheochromocytoma Benign

Bone Marrow

Leukemia Mononuclear

Epididymis

Hypospermia

Mild

Heart

Cardiomyopathy

Moderate

Kidney

Nephropathy

Marked

Liver

Bile Duct

Hyperplasia

Mild

Leukemia Mononuclear

Lung

Interstitialium

Fibrosis

Moderate

Alveolar Epith, Bronchiole

Hyperplasia

Mild

Lymph Node

Mandibular

Leukemia Mononuclear

Mesenteric

Leukemia Mononuclear

Spleen

Leukemia Mononuclear

Testes

Interstit Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 430

TRT#: 4

SEX: Male

DAY ON TEST: 596

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Pancreas	Pituitary Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Testes	Thymus	Trachea	Urinary Bladder

**MISSING**

Harderian Gland	Mammary Gland	Parathyroid Gland
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**AUTO PRECLUDES DIAG.**

Intestine Large - Colon	Intestine Small - Jejunum	Thyroid Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	Multiple
Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	
Kidney		Nephropathy	Marked
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Moderate
Lung	Interstitium	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 431

TRT#: 4

SEX: Male

DAY ON TEST: 754

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Preputial Gland	Skeletal Muscle	Skin	Spleen
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mandibular	Lymph Node - Mesenteric	Salivary Glands	Thymus
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**OBSERVATIONS**

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lung	Interstitialium	Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith, Bronchiole	Fibrosis	Mild
		Hyperplasia	Mild
		Mineralization	Mild

Note: A/B CARCINOMA WITH SQUAMOUS DIFFERENTIATION

Mammary Gland		Cyst	
Nose	Mucosa	Hyperplasia	Mild
		Inflammation	Acute, Mild
Parathyroid Gland	Bilateral	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Mild
Seminal Vesicle		Inflammation	Acute, Mild
Stomach	Forestomach, Submucosa	Mineralization	Marked
	Glandular, Submucosa	Mineralization	Marked
Testes		Degeneration	Mild

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:32:00  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 431

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 754

**DOSE:** 10 MG/M3ASBESTOS

**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: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 432

TRT#: 4

SEX: Male

DAY ON TEST: 661

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mesenteric	Nose	Preputial Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Salivary Glands
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lung	Interstitium	Fibrosis	Mild
Mammary Gland		Cyst	
Pancreas	Acinus	Atrophy	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Stomach	Forestomach, Submucosa	Inflammation	Mild
	Forestomach	Ulcer	Focal, Mild
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 433

TRT#: 4

SEX: Male

DAY ON TEST: 628

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Salivary Glands	Seminal Vesicle
Spleen	Stomach - Forestomach	Stomach - Glandular	Testes
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Skeletal Muscle	Skin
Thymus			

**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	
	Interstitial	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 434

TRT#: 4

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3ASBESTOS

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Thymus	Urinary Bladder	

MISSING

Harderian Gland	Larynx	Lung	Mammary Gland
Parathyroid Gland	Thyroid Gland	Trachea	

INSUFFICIENT TISSUE

Pituitary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
	Bile Duct	Proliferation	Moderate
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Nose		Inflammation	Acute, Mild
Pancreas	Acinus	Atrophy	Focal, Mild
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 435

TRT#: 4

SEX: Male

DAY ON TEST: 789

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Nose	Pancreas	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Skin	Thymus
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**OBSERVATIONS**

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Bone Marrow		Fibrous Osteodystrophy	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	
	Interstitial Alveolar Epith, Bronchiole	Fibrosis	Mild
		Hyperplasia	Mild
Mammary Gland		Cyst	
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 436

TRT#: 4

SEX: Male

DAY ON TEST: 739

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO: 2

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Nose	Pancreas	Parathyroid Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Forestomach	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Mammary Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
Lung	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Pituitary Gland		Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 437

TRT#: 4

SEX: Male

DAY ON TEST: 656

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Mandibular	Mammary Gland
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Bronchial	Lymph Node - Mesenteric
------------------------	-------------------------

**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Minimal
	Atrium	Thrombosis	
Kidney	Vein	Infarct	Mild
		Nephropathy	Marked
	Vein	Thrombosis	
Liver		Leukemia Mononuclear	
Lung	Interstitialium	Fibrosis	Moderate
		Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Spleen		Leukemia Mononuclear	
Stomach	Forestomach	Ulcer	Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 438

TRT#: 4

SEX: Male

DAY ON TEST: 743

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Esophagus	Eye	Harderian Gland	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Liver	Lymph Node - Bronchial
Lymph Node - Mandibular	Nose	Pancreas	Preputial Gland
Salivary Glands	Seminal Vesicle	Spleen	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Skeletal Muscle	Skin
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**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Lung	Interstitial	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
	Interstitial	Mineralization	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Hyperplasia	Focal, Mild
Stomach	Forestomach, Submucosa	Mineralization	Mild
	Glandular, Submucosa	Mineralization	Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 439

TRT#: 4

SEX: Male

DAY ON TEST: 656

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mesenteric	Nose	Pancreas
Preputial Gland	Seminal Vesicle	Skeletal Muscle	Skin
Spleen	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mandibular	Mammary Gland	Salivary Glands
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Hepatocyte	Vacuolization Cytoplasmic	Mild
Lung	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Focal, Mild
Stomach	Forestomach, Submucosa	Inflammation	Mild
	Forestomach	Ulcer	Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 440

TRT#: 4

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3ASBESTOS

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Bone	Bone Marrow	Brain
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Spleen	Stomach - Forestomach
Stomach - Glandular	Urinary Bladder		

**MISSING**

Esophagus	Harderian Gland	Larynx	Lung
Lymph Node - Bronchial	Mammary Gland	Thymus	Trachea

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Skin		Keratoacanthoma	
Testes	Interstit Cell	Adenoma	
Thyroid Gland	Follicular Cel	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 441

TRT#: 4

SEX: Male

DAY ON TEST: 600

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

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	Lacrimal Gland	Larynx
Liver	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Pancreas	Parathyroid Gland	Preputial Gland
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Glandular	Testes
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Mammary Gland

**OBSERVATIONS**

Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Moderate
Lung	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Stomach	Forestomach, Submucosa	Inflammation	Mild
	Forestomach	Ulcer	Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 442

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

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	Lacrimal Gland	Larynx	Liver
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thymus	Thyroid Gland	Trachea	Urinary Bladder

**MISSING**

Harderian Gland	Mammary Gland	Preputial Gland
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Carcinoma	
Kidney		Nephropathy	Marked
Lung	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Hyperplasia	Focal, Mild
Testes		Degeneration	Mild
	Tunic	Mesothelioma Benign	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 443

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 743

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Prostate	Seminal Vesicle	Urinary Bladder
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**MISSING**

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	Kidney	Lacrimal Gland
Larynx	Liver	Lung	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Mammary Gland	Nose
Pancreas	Parathyroid Gland	Pituitary Gland	Preputial Gland
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea

**OBSERVATIONS**

Epididymis	Hypospermia	Mild
Salivary Glands	Sarcoma	
Testes	Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 444

TRT#: 4

SEX: Male

DAY ON TEST: 726

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Nose	Pancreas
Parathyroid Gland	Salivary Glands	Skeletal Muscle	Skin
Stomach - Glandular	Testes	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Bilateral, Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Mild
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Carcinoma	
	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Moderate
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Preputial Gland		Inflammation	Acute, Mild
Prostate		Inflammation	Acute, Mild
Seminal Vesicle		Inflammation	Acute, Mild
Spleen		Leukemia Mononuclear	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

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**ANIMAL ID:** 444

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 726

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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Stomach	Epithelium, Forestomach	Hyperplasia	Mild
	Forestomach, Submucosa	Inflammation	Mild
	Forestomach, Mucosa	Ulcer	Mild

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 445

TRT#: 4

SEX: Male

DAY ON TEST: 604

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Bone Marrow	Brain	Esophagus
Eye	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Nose
Pancreas	Parathyroid Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Harderian Gland	Lymph Node - Mesenteric	Mammary Gland	Preputial Gland
Spleen			

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver	Hepatocyte	Vacuolization Cytoplasmic	Mild
Lung	Interstitialium	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Moderate
Pituitary Gland		Adenoma	
Skeletal Muscle		Necrosis	Mild
Stomach	Forestomach, Submucosa	Inflammation	Mild
Testes		Degeneration	Mild
		Mineralization	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 446

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Esophagus	Eye	Intestine Large - Cecum
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Mammary Gland
Nose	Pancreas	Prostate	Salivary Glands
Skeletal Muscle	Stomach - Forestomach	Stomach - Glandular	Trachea
Urinary Bladder			

**MISSING**

Brain	Harderian Gland	Pituitary Gland	Preputial Gland
Seminal Vesicle	Thymus		

**OBSERVATIONS**

Adrenal Gland	Cortex	Leukemia Mononuclear	
	Medulla	Leukemia Mononuclear	
	Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Intestine Large	Colon, Mucosa, Submucosa	Inflammation	Marked
Note: COLON INFLAMMATION IS NECROTIZING			
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung	Interstitium	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Moderate
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Parathyroid Gland		Hyperplasia	Mild
Skin		Acanthosis	Focal, Mild
Spleen		Leukemia Mononuclear	
Testes	Bilateral, Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

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**ANIMAL ID:** 446

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 787

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Terminal Sacrifice

**HISTO:**

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thyroid Gland

Follicular Cel

Adenoma

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PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 447

TRT#: 4

SEX: Male

DAY ON TEST: 565

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

Bone  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Preputial Gland  
Stomach - Glandular  
Urinary Bladder

Brain  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Prostate  
Testes

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Bronchial  
Seminal Vesicle  
Thyroid Gland

MISSING

Lymph Node - Mandibular  
Salivary Glands

Mammary Gland  
Skeletal Muscle

Pancreas  
Thymus

Pituitary Gland

INSUFFICIENT TISSUE

Parathyroid Gland

OBSERVATIONS

Adrenal Gland  
Bone Marrow  
Heart  
Kidney  
Liver

Cortex  
  
  
  
Hepatocyte

Vacuolization Cytoplasmic  
Leukemia Mononuclear  
Cardiomyopathy  
Nephropathy  
Adenoma

Mild  
  
  
  
Moderate  
Minimal

Lung

Bile Duct  
  
Vein  
Interstitialium

Degeneration  
Hyperplasia  
Leukemia Mononuclear  
Thrombosis  
Fibrosis

Cystic, Mild  
Mild  
  
  
Moderate

Lymph Node  
Skin  
Spleen

Mesenteric

Leukemia Mononuclear  
Leukemia Mononuclear  
Fibrosarcoma  
Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 448

TRT#: 4

SEX: Male

DAY ON TEST: 691

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Esophagus	Eye
Harderian Gland	Intestine Large - Rectum	Lacrimal Gland	Larynx
Mammary Gland	Parathyroid Gland	Prostate	Salivary Glands
Seminal Vesicle	Skin	Stomach - Forestomach	Trachea
Urinary Bladder			

MISSING

Preputial Gland

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Nose		

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung	Interstitialium	Fibrosis	Moderate
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pancreas		Leukemia Mononuclear	
Pituitary Gland		Hyperplasia	Mild
Skeletal Muscle		Degeneration	Mild
Spleen		Leukemia Mononuclear	
Stomach	Glandular	Necrosis	Focal, Mild
Testes	Interstit Cell	Adenoma	

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

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**ANIMAL ID:** 448

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 691

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

Thymus

Necrosis

Mild

Thyroid Gland

Follicular Cel

Adenoma

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 449

TRT#: 4

SEX: Male

DAY ON TEST: 565

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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
Lacrimal Gland	Larynx	Nose	Pancreas
Parathyroid Gland	Prostate	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mandibular	Preputial Gland	Salivary Glands	Thymus
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**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Mild
Kidney		Nephropathy	Marked
Liver		Hepatodiaphragmatic Nodule	
Lung		Alveolar/Bronchiolar Carcinoma	
	Interstitial	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Note: A/B CARCINOMA WITH SQUAMOUS DIFFERENTIATION			
Lymph Node	Bronchial	Ectasia	Mild
	Mesenteric	Ectasia	Mild
	Bronchial	Hemorrhage	Mild
Mammary Gland		Cyst	
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 450

TRT#: 4

SEX: Male

DAY ON TEST: 628

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Bone	Brain	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Mammary Gland	Preputial Gland
Skeletal Muscle			

**INSUFFICIENT TISSUE**

Pituitary Gland

**OBSERVATIONS**

Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver		Leukemia Mononuclear	
Lung	Interstitial	Fibrosis	Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Wollastonite calcium silicates

**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:32:00

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

**Lab:** NORTHROP

**ANIMAL ID:** 453

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 646

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**MISSING**

Adrenal Gland - Cortex  
Brain  
Harderian Gland  
Intestine Large - Rectum  
Kidney  
Lung  
Mammary Gland  
Pituitary Gland  
Seminal Vesicle  
Stomach - Glandular  
Trachea

Adrenal Gland - Medulla  
Epididymis  
Heart  
Intestine Small - Duodenum  
Lacrimal Gland  
Lymph Node - Bronchial  
Nose  
Preputial Gland  
Skeletal Muscle  
Testes  
Urinary Bladder

Bone  
Esophagus  
Intestine Large - Cecum  
Intestine Small - Ileum  
Larynx  
Lymph Node - Mandibular  
Pancreas  
Prostate  
Skin  
Thymus

Bone Marrow  
Eye  
Intestine Large - Colon  
Intestine Small - Jejunum  
Liver  
Lymph Node - Mesenteric  
Parathyroid Gland  
Salivary Glands  
Stomach - Forestomach  
Thyroid Gland

**AUTO PRECLUDES DIAG.**

Tissue NOS

**OBSERVATIONS**

Spleen Leukemia Mononuclear

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 455

TRT#: 4

SEX: Male

DAY ON TEST: 747

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Bone Marrow	Brain
Epididymis	Esophagus	Eye	Harderian Gland
Intestine Large - Rectum	Lacrimal Gland	Larynx	Nose
Pancreas	Preputial Gland	Prostate	Seminal Vesicle
Trachea	Urinary Bladder		

MISSING

Lymph Node - Mandibular	Mammary Gland	Parathyroid Gland	Salivary Glands
Skeletal Muscle	Skin	Thymus	Thyroid Gland

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Small - Duodenum	Intestine Small - Ileum
Intestine Small - Jejunum	Stomach - Forestomach	Stomach - Glandular	

OBSERVATIONS

Heart		Cardiomyopathy	Moderate
	Atrium	Thrombosis	
Kidney		Nephropathy	Moderate
Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Adenoma	
	Interstitial	Fibrosis	Mild
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 456

TRT#: 4

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3ASBESTOS

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Nose	Pancreas
Parathyroid Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Trachea	Urinary Bladder	

**MISSING**

Lymph Node - Mesenteric	Mammary Gland	Preputial Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Lung	Interstitialium	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Pituitary Gland		Hyperplasia	Mild
Testes	Interstitial Cell	Adenoma	
Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 457

TRT#: 4

SEX: Male

DAY ON TEST: 737

DOSE: 10 MG/M3ASBESTOS

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mesenteric
Mammary Gland	Nose	Seminal Vesicle	Skeletal Muscle
Skin	Spleen	Stomach - Forestomach	Stomach - Glandular
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Parathyroid Gland	Preputial Gland	Salivary Glands
Thymus	Thyroid Gland	Trachea	

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Vacuolization Cytoplasmic	Mild
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
Lung	Interstitialium	Fibrosis	Moderate
Pancreas	Acinus	Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Mild
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 458

TRT#: 4

SEX: Male

DAY ON TEST: 788

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone Marrow	Brain	Esophagus	Eye
Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Harderian Gland	Mammary Gland	Preputial Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
	Cortex	Osteosarcoma	Metastatic (Bone)
	Medulla	Osteosarcoma	Metastatic (Bone)
Note: ADRENAL MEDULLA-AMYLOID?			
Bone		Osteosarcoma	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
Lung		Alveolar/Bronchiolar Adenoma	
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
		Osteosarcoma	Metastatic (Bone)
Pancreas	Acinar Cell	Adenoma	
Pituitary Gland		Adenoma	
Prostate		Inflammation	Acute, Mild
Spleen		Osteosarcoma	Metastatic (Bone)
Testes	Interstit Cell	Adenoma	
Tissue NOS		Osteosarcoma	Metastatic (Bone)

Note: TISSUE NOS IS ADIPOSE TISSUE

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:32:00  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 458

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 788

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Terminal Sacrifice

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 459

TRT#: 4

SEX: Male

DAY ON TEST: 787

DOSE: 10 MG/M3ASBESTOS

DISP: Terminal Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Harderian Gland	Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Bilateral, Medulla	Pheochromocytoma Benign	
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Adenoma	
	Interstitial	Fibrosis	Moderate
	Alveolar Epith, Bronchiole	Hyperplasia	Moderate
Lymph Node	Bronchial	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes	Interstitial Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 462

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 705

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Medulla  
Esophagus  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Preputial Gland  
Skin  
Trachea

Bone  
Eye  
Intestine Large - Rectum  
Lacrimal Gland  
Pancreas  
Prostate  
Stomach - Forestomach  
Urinary Bladder

Brain  
Harderian Gland  
Intestine Small - Duodenum  
Larynx  
Parathyroid Gland  
Seminal Vesicle  
Stomach - Glandular

Epididymis  
Intestine Large - Cecum  
Intestine Small - Ileum  
Mammary Gland  
Pituitary Gland  
Skeletal Muscle  
Thyroid Gland

**MISSING**

Lymph Node - Mandibular

Salivary Glands

Thymus

**AUTO PRECLUDES DIAG.**

Testes

**OBSERVATIONS**

Adrenal Gland  
Bone Marrow  
Heart  
Kidney  
Liver  
Lung  
  
Lymph Node  
  
Spleen

Cortex  
  
  
  
  
Interstitial  
  
Bronchial  
Mesenteric

Adenoma  
Leukemia Mononuclear  
Leukemia Mononuclear  
Nephropathy  
Leukemia Mononuclear  
Fibrosis  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear  
Leukemia Mononuclear

Moderate  
  
Moderate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 463

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Esophagus
Eye	Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Pancreas	Parathyroid Gland
Preputial Gland	Prostate	Salivary Glands	Seminal Vesicle
Skeletal Muscle	Stomach - Forestomach	Stomach - Glandular	Thymus
Trachea	Urinary Bladder		

MISSING

Lymph Node - Bronchial	Lymph Node - Mesenteric	Pituitary Gland
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OBSERVATIONS

Adrenal Gland	Medulla	Hyperplasia	Mild
Bone Marrow		Leukemia Mononuclear	
Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Moderate
Liver		Leukemia Mononuclear	
Lung	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Lymph Node	Mandibular	Leukemia Mononuclear	
Mammary Gland		Fibrosarcoma	
Nose		Inflammation	Acute, Mild
Skin		Fibrosarcoma	
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
		Degeneration	Mild
Thyroid Gland	Follicular Cel	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 464

TRT#: 4

SEX: Male

DAY ON TEST: 610

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Harderian Gland  
Intestine Small - Jejunum  
Lymph Node - Bronchial  
Prostate  
Stomach - Forestomach  
Thyroid Gland

Adrenal Gland - Medulla  
Epididymis  
Heart  
Lacrimal Gland  
Lymph Node - Mandibular  
Salivary Glands  
Stomach - Glandular  
Trachea

Bone  
Esophagus  
Intestine Small - Duodenum  
Larynx  
Nose  
Seminal Vesicle  
Testes  
Urinary Bladder

Bone Marrow  
Eye  
Intestine Small - Ileum  
Liver  
Parathyroid Gland  
Spleen  
Thymus

**MISSING**

Lymph Node - Mesenteric  
Skin

Mammary Gland

Preputial Gland

Skeletal Muscle

**AUTO PRECLUDES DIAG.**

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Pancreas

**OBSERVATIONS**

Kidney  
Lung  
  
Pituitary Gland

Interstitialium  
Alveolar Epith, Bronchiole

Nephropathy  
Fibrosis  
Hyperplasia  
Adenoma

Marked  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 465

TRT#: 4

SEX: Male

DAY ON TEST: 649

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mesenteric	Nose	Pancreas
Parathyroid Gland	Preputial Gland	Prostate	Seminal Vesicle
Skeletal Muscle	Skin	Spleen	Stomach - Forestomach
Stomach - Glandular	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Lymph Node - Mandibular	Mammary Gland	Salivary Glands
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**OBSERVATIONS**

Epididymis		Hypospermia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Hepatocyte	Vacuolization Cytoplasmic	Mild
Lung		Alveolar/Bronchiolar Carcinoma	
	Interstitium	Fibrosis	Mild
Pituitary Gland		Adenoma	
Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 466

TRT#: 4

SEX: Male

DAY ON TEST: 730

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Lymph Node - Mandibular	Lymph Node - Mesenteric	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Mammary Gland

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Mild
Islets, Pancreatic		Adenoma	
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Adenoma	
		Alveolar/Bronchiolar Carcinoma	
	Interstitialium	Fibrosis	Mild
	Alveolar Epith, Bronchiole	Hyperplasia	Mild
Nose		Inflammation	Acute, Mild
Pancreas	Acinus	Hyperplasia	Mild
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Skin		Keratoacanthoma	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** 05083-01  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Wollastonite calcium silicates  
**CAS Number:** 13983-17-0

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:32:00  
**First Dose M/F:** NA / NA  
**Lab:** NORTHROP

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**ANIMAL ID:** 466

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 730

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Dead

**HISTO:**

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 468

TRT#: 4

SEX: Male

DAY ON TEST: 607

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Esophagus  
Intestine Large - Rectum  
Lacrimal Gland  
Parathyroid Gland  
Skeletal Muscle  
Thymus

Adrenal Gland - Medulla  
Eye  
Intestine Small - Duodenum  
Larynx  
Preputial Gland  
Skin  
Thyroid Gland

Bone  
Intestine Large - Cecum  
Intestine Small - Ileum  
Nose  
Prostate  
Stomach - Forestomach  
Trachea

Brain  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pancreas  
Seminal Vesicle  
Testes  
Urinary Bladder

**MISSING**

Harderian Gland

Lymph Node - Mandibular

Mammary Gland

Salivary Glands

**OBSERVATIONS**

Bone Marrow  
Epididymis  
Heart  
Kidney  
Liver  
Lung  
Lymph Node  
Pituitary Gland  
Spleen  
Stomach

Interstitialium  
Alveolar Epith, Bronchiole  
Bronchial  
Mesenteric  
Glandular, Submucosa

Leukemia Mononuclear  
Hypospermia  
Cardiomyopathy  
Nephropathy  
Leukemia Mononuclear  
Fibrosis  
Hyperplasia  
Leukemia Mononuclear  
Leukemia Mononuclear  
Adenoma  
Leukemia Mononuclear  
Leukemia Mononuclear

Mild  
Moderate  
Moderate  
Moderate  
Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 469

TRT#: 4

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3ASBESTOS

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex

Bone

Bone Marrow

Epididymis

Eye

Intestine Large - Cecum

Intestine Large - Colon

Intestine Large - Rectum

Intestine Small - Duodenum

Intestine Small - Ileum

Intestine Small - Jejunum

Kidney

Lymph Node - Mesenteric

Mammary Gland

Pancreas

Preputial Gland

Prostate

Seminal Vesicle

Skeletal Muscle

Skin

Spleen

Stomach - Forestomach

Stomach - Glandular

Testes

Urinary Bladder

**MISSING**

Adrenal Gland - Medulla

Esophagus

Harderian Gland

Heart

Lacrimal Gland

Larynx

Lung

Lymph Node - Bronchial

Lymph Node - Mandibular

Nose

Parathyroid Gland

Pituitary Gland

Salivary Glands

Thymus

Thyroid Gland

Trachea

**AUTO PRECLUDES DIAG.**

Brain

**OBSERVATIONS**

Liver

Necrosis

Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 470

TRT#: 4

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3ASBESTOS

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Lymph Node - Mesenteric  
Seminal Vesicle  
Stomach - Forestomach

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Nose  
Skeletal Muscle  
Stomach - Glandular

Bone  
Eye  
Intestine Large - Rectum  
Kidney  
Pancreas  
Skin  
Testes

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Lacrimal Gland  
Prostate  
Spleen  
Urinary Bladder

**MISSING**

Esophagus  
Lymph Node - Bronchial  
Preputial Gland  
Trachea

Heart  
Lymph Node - Mandibular  
Salivary Glands

Larynx  
Mammary Gland  
Thymus

Lung  
Parathyroid Gland  
Thyroid Gland

**AUTO PRECLUDES DIAG.**

Pituitary Gland

**OBSERVATIONS**

Liver Necrosis Focal, Mild

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

**ANIMAL ID:** 472

**TRT#:** 4

**SEX:** Male

**DAY ON TEST:** 374

**DOSE:** 10 MG/M3ASBESTOS

**DISP:** Interval Sacrifice

**HISTO:**

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Mammary Gland  
Seminal Vesicle  
Stomach - Forestomach

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Pituitary Gland  
Skeletal Muscle  
Stomach - Glandular

Bone  
Eye  
Intestine Large - Rectum  
Kidney  
Preputial Gland  
Skin  
Testes

Bone Marrow  
Heart  
Intestine Small - Duodenum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Urinary Bladder

**MISSING**

Esophagus  
Lung  
Parathyroid Gland  
Trachea

Harderian Gland  
Lymph Node - Bronchial  
Salivary Glands

Lacrimal Gland  
Lymph Node - Mandibular  
Thymus

Larynx  
Nose  
Thyroid Gland

**AUTO PRECLUDES DIAG.**

Pancreas

**OBSERVATIONS**

Liver

Necrosis

Focal, Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 473

TRT#: 4

SEX: Male

DAY ON TEST: 719

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

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	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Pancreas	Preputial Gland	Salivary Glands
Skeletal Muscle	Skin	Spleen	Thyroid Gland
Trachea	Urinary Bladder		

**MISSING**

Eye	Harderian Gland	Mammary Gland	Thymus
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**OBSERVATIONS**

Adrenal Gland	Medulla	Pheochromocytoma Benign	
Epididymis		Hypospermia	Mild
Heart		Mineralization	Marked
	Atrium	Thrombosis	
Kidney		Nephropathy	Marked
Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
	Bile Duct	Inflammation	Mild
Lung	Interstitium	Fibrosis	Mild
		Mineralization	Moderate
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Prostate		Inflammation	Chronic, Mild
Seminal Vesicle		Inflammation	Acute, Mild
Stomach	Glandular	Mineralization	Mild
	Forestomach	Ulcer	Focal, Mild
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 475

TRT#: 4

SEX: Male

DAY ON TEST: 374

DOSE: 10 MG/M3ASBESTOS

DISP: Interval Sacrifice

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex  
Brain  
Intestine Large - Cecum  
Intestine Small - Ileum  
Liver  
Preputial Gland  
Skin  
Testes

Adrenal Gland - Medulla  
Epididymis  
Intestine Large - Colon  
Intestine Small - Jejunum  
Lymph Node - Mesenteric  
Prostate  
Spleen  
Urinary Bladder

Bone  
Eye  
Intestine Large - Rectum  
Kidney  
Nose  
Seminal Vesicle  
Stomach - Forestomach

Bone Marrow  
Harderian Gland  
Intestine Small - Duodenum  
Lacrimal Gland  
Pancreas  
Skeletal Muscle  
Stomach - Glandular

**MISSING**

Esophagus  
Lymph Node - Bronchial  
Salivary Glands

Heart  
Lymph Node - Mandibular  
Thymus

Larynx  
Mammary Gland  
Thyroid Gland

Lung  
Parathyroid Gland  
Trachea

**OBSERVATIONS**

Pituitary Gland

Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 476

TRT#: 4

SEX: Male

DAY ON TEST: 635

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

Adrenal Gland - Cortex	Adrenal Gland - Medulla	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	Lacrimal Gland
Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric
Nose	Parathyroid Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Skin	Spleen
Stomach - Forestomach	Stomach - Glandular	Testes	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

**MISSING**

Preputial Gland

**OBSERVATIONS**

Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Adenoma	
		Carcinoma	
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
Lung	Interstitium	Fibrosis	Moderate
		Inflammation	Suppurative, Acute, Moderate
Mammary Gland		Cyst	
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland		Adenoma	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 477

TRT#: 4

SEX: Male

DAY ON TEST: 738

DOSE: 10 MG/M3ASBESTOS

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
Lacrimal Gland	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Prostate	Salivary Glands	Seminal Vesicle	Skeletal Muscle
Skin	Stomach - Forestomach	Stomach - Glandular	Testes
Urinary Bladder			

MISSING

Harderian Gland	Larynx	Lung	Lymph Node - Bronchial
Mammary Gland	Parathyroid Gland	Preputial Gland	Thymus
Thyroid Gland	Trachea		

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Heart		Cardiomyopathy	Moderate
Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Mild
Pancreas		Fibrosis	Focal, Mild
Pituitary Gland		Adenoma	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 478

TRT#: 4

SEX: Male

DAY ON TEST: 729

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Brain	Epididymis	Esophagus
Eye	Harderian Gland	Lacrimal Gland	Larynx
Lymph Node - Mandibular	Lymph Node - Mesenteric	Preputial Gland	Prostate
Salivary Glands	Seminal Vesicle	Skeletal Muscle	Thymus
Thyroid Gland	Trachea	Urinary Bladder	

MISSING

Lymph Node - Bronchial

AUTO PRECLUDES DIAG.

Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum	Intestine Small - Duodenum
Intestine Small - Ileum	Intestine Small - Jejunum	Nose	Stomach - Forestomach
Stomach - Glandular			

OBSERVATIONS

Adrenal Gland	Medulla	Pheochromocytoma Benign	
	Cortex	Vacuolization Cytoplasmic	Mild
Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Islets, Pancreatic		Carcinoma	
Kidney		Nephropathy	Marked
Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
Lung		Alveolar/Bronchiolar Carcinoma	
		Sarcoma	Metastatic (Skin)
Mammary Gland		Cyst	
Parathyroid Gland		Hyperplasia	Mild
Pituitary Gland		Adenoma	
Skin		Sarcoma	
Spleen		Leukemia Mononuclear	
Testes		Degeneration	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 1411

TRT#: 2

SEX: Male

DAY ON TEST: 566

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Adrenal Gland - Cortex	Bone	Brain	Epididymis
Esophagus	Eye	Intestine Large - Cecum	Intestine Large - Colon
Intestine Large - Rectum	Intestine Small - Duodenum	Intestine Small - Ileum	Intestine Small - Jejunum
Lacrimal Gland	Larynx	Lymph Node - Bronchial	Lymph Node - Mandibular
Lymph Node - Mesenteric	Mammary Gland	Nose	Parathyroid Gland
Preputial Gland	Salivary Glands	Skin	Stomach - Forestomach
Stomach - Glandular	Thyroid Gland	Trachea	

MISSING

Harderian Gland	Skeletal Muscle	Thymus	
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OBSERVATIONS

Bone Marrow		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Marked
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Alveolar/Bronchiolar Carcinoma	
Pancreas	Duct	Adenoma	
Pituitary Gland	Pars Distalis	Adenoma	
Prostate		Inflammation	Acute, Moderate
Spleen		Leukemia Mononuclear	
Testes	Interstit Cell	Adenoma	
Urinary Bladder	Transit Epithe	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 1412

TRT#: 2

SEX: Male

DAY ON TEST: 764

DOSE: 10 MG/M3 24 MO

DISP: Moribund

HISTO:

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

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

**MISSING**

Pituitary Gland	Preputial Gland
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**OBSERVATIONS**

Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Leukemia Mononuclear	
Kidney		Nephropathy	Mild
Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
Lung		Leukemia Mononuclear	
Lymph Node	Bronchial	Leukemia Mononuclear	
	Mandibular	Leukemia Mononuclear	
	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	
Testes		Leukemia Mononuclear	
Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 4151

TRT#: 4

SEX: Male

DAY ON TEST: 94

DOSE: 10 MG/M3ASBESTOS

DISP: Interval Sacrifice

HISTO:

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Bone	Epididymis	Esophagus	Eye
Harderian Gland	Intestine Large - Cecum	Intestine Large - Colon	Intestine Large - Rectum
Intestine Small - Duodenum	Lacrimal Gland	Larynx	Lymph Node - Bronchial
Nose	Pancreas	Parathyroid Gland	Prostate
Seminal Vesicle	Skeletal Muscle	Skin	Stomach - Forestomach
Stomach - Glandular	Testes	Thymus	Thyroid Gland
Trachea	Urinary Bladder		

MISSING

Adrenal Gland - Cortex	Adrenal Gland - Medulla	Lymph Node - Mandibular	Mammary Gland
Pituitary Gland	Preputial Gland	Salivary Glands	

AUTO PRECLUDES DIAG.

Intestine Small - Ileum	Intestine Small - Jejunum
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OBSERVATIONS

Bone Marrow		Leukemia Mononuclear	
Brain		Leukemia Mononuclear	
Heart		Cardiomyopathy	Moderate
Kidney		Leukemia Mononuclear	
Liver		Leukemia Mononuclear	
Lung	Interstitial	Fibrosis	Moderate
		Leukemia Mononuclear	
Lymph Node	Mesenteric	Leukemia Mononuclear	
Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 05083-01

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Wollastonite calcium silicates

CAS Number: 13983-17-0

Date Report Requested: 10/23/2014

Time Report Requested: 12:32:00

First Dose M/F: NA / NA

Lab: NORTHROP

ANIMAL ID: 4152

TRT#: 4

SEX: Male

DAY ON TEST: 387

DOSE: 10 MG/M3ASBESTOS

DISP: Dead

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	Lacrimal Gland	Larynx
Lymph Node - Bronchial	Lymph Node - Mandibular	Lymph Node - Mesenteric	Nose
Parathyroid Gland	Preputial Gland	Prostate	Salivary Glands
Seminal Vesicle	Skeletal Muscle	Spleen	Stomach - Glandular
Testes	Thymus	Thyroid Gland	Trachea
Urinary Bladder			

**MISSING**

Mammary Gland

**OBSERVATIONS**

Adrenal Gland	Medulla	Hyperplasia	Mild
Heart		Cardiomyopathy	Moderate
Kidney		Nephropathy	Mild
Liver		Clear Cell Focus	
Lung	Interstitialium	Fibrosis	Mild
Pancreas	Acinus	Atrophy	Mild
Pituitary Gland		Adenoma	
Skin		Cyst Epithelial Inclusion	
Stomach	Forestomach, Submucosa	Adenoma	

PRIMARY CAUSE OF DEATH

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**\*\* END OF REPORT \*\***

\* PROTOCOL REQUIRED TISSUE