

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:03

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

**Lab:** NA

**C Number:** C61223A

**Cage Range:** All

**Date Range:** All

**Reasons For Removal:** All

**Removal Date Range:** All

**Treatment Groups:** All

**Study Gender:** Female

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:03

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

**Lab:** NA

**ANIMAL ID:** 1\_637

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Eye	Retina	Cataract Degeneration, Nos Hemorrhage Synechia, Posterior
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Bile Duct	Focal Cellular Change Inflammation, Chronic Pigmentation, Nos
Lung	Mesenteric Lymph Node	Alveolar/Bronchiolar Carcinoma
Lymph node		Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma
Pituitary gland		Hyperplasia, Focal
Spleen		Hemosiderosis
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Fibrosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:03

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_638

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland  
Eye

Cortex Nos

Metamorphosis, Fatty  
Cataract

Heart  
Intestine Large  
Kidney

Retina  
Myocardium Nos  
Colon

Degeneration, Nos  
Inflammation, Chronic Focal  
Parasitism  
Inflammation, Chronic  
Mineralization

Lung  
Mammary gland

Tubule

Pigmentation, Nos  
Inflammation, Chronic  
Cystic Ducts

Stomach

Fibroadenoma  
Acanthosis  
Hyperkeratosis  
Inflammation, Acute Focal  
Inflammation, Chronic Diffuse  
Necrosis, Focal

Unspecified  
Uterus

Multiple Organs Nos

Lymphoma, Histiocytic-Malignant Type  
Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

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**CAS Number:** 12001-29-5

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**Time Report Requested:** 17:51:03

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

**Lab:** NA

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**ANIMAL ID:** 1\_639

**TRT#:** 1

**DOSE:** 0

**SEX:** Female

**DISP:** Moribund Sacrifice

**DAY ON TEST:**

**HISTO:**

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**OBSERVATIONS**

Liver	Focal Cellular Change
Lung	Inflammation, Chronic
Mammary gland	Fibroadenoma
Spleen	Hematopoiesis

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

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CAS Number: 12001-29-5

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Time Report Requested: 17:51:03

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_640

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Brain	Cerebellum Nos	Hemorrhage
	Cerebrum	Hemorrhage
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
Pancreas	Islets	Islet-Cell Adenoma
Pituitary gland		Adenoma, Nos
		Angiectasis
		Hemorrhage
		Necrosis, Focal
		Thrombosis, Nos
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
Uterus		Hydrometra

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

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**Test Type:** Long-Term

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

**Lab:** NA

**ANIMAL ID:** 1\_641

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Eye

Cataract

Retina

Degeneration, Nos

Heart

Inflammation, Chronic Focal

Kidney

Inflammation, Chronic

Liver

Bile Duct

Inflammation, Chronic

Pigmentation, Nos

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mammary gland

Cystic Ducts

Fibroadenoma

Hyperplasia, Nos

Ovary

Thecoma

Pituitary gland

Adenoma, Nos

Spleen

Hematopoiesis

Hemosiderosis

Thyroid

Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

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CAS Number: 12001-29-5

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Time Report Requested: 17:51:03

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_642

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Cataract
		Degeneration, Nos
		Hemorrhage
		Synechia, Posterior
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Small	Mesentery Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
Thyroid		Ulcer, Perforated
		C-Cell Adenoma
		C-Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

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**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:03

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

**Lab:** NA

**ANIMAL ID:** 1\_643

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:03  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_644

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Eye	Retina	Degeneration, Nos Hemorrhage Synechia, Posterior
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos
	Bile Duct	Inflammation, Chronic Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma Galactocele
Pituitary gland		Hyperplasia, Diffuse
Spleen		Hemosiderosis
Thyroid		C-Cell Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_645

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Angiectasis
		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Salivary gland		Atrophy, Focal
Thyroid		C-Cell Carcinoma
		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Squamous Cell Carcinoma, Invasive
Zymbal gland		Squamous Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_646

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Liver

Focal Cellular Change  
Metamorphosis, Fatty

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Pituitary gland

Adenoma, Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_647

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
		Fibrosarcoma
Nasal cavity	Turbinate Nos	Squamous Cell Carcinoma
Spleen		Hematopoiesis
Thyroid		C-Cell Adenoma
Unspecified	Ear	Fibrosarcoma
	Multiple Organs Nos	Squamous Cell Carcinoma, Invasive

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_648

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
Liver		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hematopoiesis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
		Ulcer, Perforated
Thyroid		C-Cell Carcinoma
		Follicular-Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_649

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Metamorphosis, Fatty

Esophagus

Hyperkeratosis

Heart

Myocardium Nos

Inflammation, Chronic Diffuse

Kidney

Inflammation, Chronic

Mineralization

Liver

Metamorphosis, Fatty

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Pituitary gland

Adenoma, Nos

Spleen

Hemosiderosis

Stomach

Acanthosis

Hyperkeratosis

Inflammation, Chronic Diffuse

Necrosis, Focal

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_650

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Heart

Cortex Nos

Metamorphosis, Fatty

Intestine Large

Myocardium Nos

Inflammation, Chronic Focal

Intestine Small

Colon

Parasitism

Kidney

Ileum, Ileum

Leiomyosarcoma

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Lung

Inflammation, Chronic

Mammary gland

Fibroadenoma

Pituitary gland

Adenoma, Nos

Cyst, Nos

Preputial gland

Squamous Cell Carcinoma

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_651

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Natural Death

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

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**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney  
Liver  
Lung  
Mammary gland  
  
Stomach  
  
Thyroid  
Unspecified  
Vagina

Cortex Nos  
Myocardium Nos  
  
  
  
  
  
  
  
Multiple Organs Nos

Metamorphosis, Fatty  
Inflammation, Chronic Diffuse  
Inflammation, Chronic  
Hepatitis, Toxic  
Inflammation, Chronic  
Cystic Ducts  
Hyperplasia, Diffuse  
Hyperkeratosis  
Necrosis, Focal  
Hyperplasia, C Cell  
Leukemia, Monocytic  
Acanthosis  
Hyperkeratosis

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_652

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Cataract Degeneration, Nos Hemorrhage
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Hemorrhage Hepatitis, Toxic
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Pancreas		Ectopia
Pituitary gland		Angiectasis
Spleen		Fibrosis, Focal Hemorrhage
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

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**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_653

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pancreas		Acinar-Cell Adenoma
		Ectopia
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hematopoiesis
Thyroid		Cyst, Follicular Nos
Unspecified	Groin	Liposarcoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
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**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_654

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Pancreas	Islets	Islet-Cell Adenoma
Pituitary gland		Cyst, Nos
Spleen		Hematopoiesis
Unspecified	Diaphragm Nos	Hernia, Nos
	Multiple Organs Nos	Leukemia, Monocytic
	Abdominal Cavity	Necrosis, Fat

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_655

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain	Cerebrum	Carcinoma, Nos, Metastatic
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Spleen		Fibrosis, Multifocal
Stomach		Acanthosis Hyperkeratosis
Unspecified	Multiple Organs Nos	Necrosis, Focal Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_656

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Thyroid		Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_657

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain	Cerebrum	Gliosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Granuloma, Nos
		Metamorphosis, Fatty
		Neoplastic Nodule
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_658

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Medulla  
Myocardium Nos

Hyperplasia, Focal  
Inflammation, Chronic Focal  
Inflammation, Chronic  
Mineralization

Liver  
Lung  
Pancreas  
Spleen  
Unspecified  
Uterus

Tubule  
Bile Duct

Pigmentation, Nos  
Hyperplasia, Nos  
Inflammation, Chronic  
Atrophy, Focal  
Fibrosis, Focal  
Leukemia, Monocytic  
Retention Fluid

Multiple Organs Nos  
Fallopian Tube

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_659

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Bone	Skull	Osteopetrosis
Bone marrow		Hypoplasia, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Lymphoid
Pituitary gland		Adenoma, Nos
Spleen	Follicles	Atrophy, Nos
		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
		Necrosis, Focal
Thyroid		C-Cell Adenoma

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_660

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Cecum, Colon	Hyperplasia, Epithelial
	Cecum, Colon	Inflammation, Chronic Focal
	Cecum, Colon	Necrosis, Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
Lung		Inflammation, Chronic
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_661

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Esophagus		Hyperkeratosis
Heart	Endocardium Nos	Sarcoma, Nos
	Atrium	Thrombosis, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lymph node	Mesenteric Lymph Node	Hemorrhage
	Mesenteric Lymph Node	Lymphangiectasis
Mammary gland		Cystic Ducts
Stomach		Acanthosis
		Hyperkeratosis
		Necrosis, Focal
Unspecified	Multiple Organs Nos	Sarcoma, Nos, Invasive
	Multiple Organs Nos	Sarcoma, Nos, Metastatic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_662

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Medulla  
Myocardium Nos

Hyperplasia, Nos  
Inflammation, Chronic Focal  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Metamorphosis, Fatty  
Pigmentation, Nos

Lung

Lymph node  
Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Cystic Ducts  
Hyperplasia, Nos

Pituitary gland

Unspecified  
Urinary bladder

Multiple Organs Nos

Adenoma, Nos  
Leukemia, Monocytic  
Inflammation, Chronic Focal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_663

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos

Lung

Angiectasis

Lymph node

Focal Cellular Change

Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic

Thyroid

Hyperplasia, Reticulum Cell

Uterus

Fibroadenoma

Hyperplasia, C Cell

Hydrometra

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_665

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye  
Intestine Large  
Kidney

Retina  
Cecum, Colon

Degeneration, Nos  
Hemorrhage  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos

Liver  
Lung  
Lymph node

Granuloma, Nos  
Inflammation, Chronic

Mandibular Lymph Node  
Mesenteric Lymph Node

Hyperplasia, Lymphoid  
Hyperplasia, Reticulum Cell

Mammary gland  
Stomach

Cystic Ducts  
Acanthosis  
Hyperkeratosis  
Inflammation, Chronic Diffuse

Unspecified  
Uterus

Eyelid

Necrosis, Focal  
Fibrosarcoma  
Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_666

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Eye		Cataract
	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change
		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hemorrhage
	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Skin	Ear	Squamous Cell Papilloma
Spleen		Hemosiderosis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_667

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Leukemia, Monocytic Metamorphosis, Fatty
Lung		Inflammation, Chronic Squamous Cell Carcinoma, Metastatic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pharynx		Squamous Cell Carcinoma, Invasive
Skin	Groin	Keratoacanthoma
Spleen		Fibrosis, Focal
Unspecified	Multiple Organs Nos	Pigmentation, Nos Squamous Cell Carcinoma, Invasive
Zymbal gland		Squamous Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_668

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
		Fibroadenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		Follicular-Cell Carcinoma
Uterus	Endometrium	Hyperplasia, Focal
		Inflammation, Acute Focal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_669

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Moribund Sacrifice

HISTO:

OBSERVATIONS

Adrenal gland	Medulla	Hyperplasia, Focal
Bone	Sternum	Osteopetrosis
	Sacrum	Osteosarcoma
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Spleen		Fibrosis, Focal
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Ulcer, Perforated
Thyroid		Hyperplasia, C Cell
Unspecified	Diaphragm Nos	Hernia, Nos
	Multiple Organs Nos	Leukemia, Monocytic
Urinary bladder		Hyperplasia, Epithelial
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_670

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Eye  
Kidney

Cortex Nos  
Retina

Metamorphosis, Fatty  
Degeneration, Nos  
Inflammation, Chronic  
Mineralization

Liver  
Lung

Tubule

Pigmentation, Nos  
Necrosis, Focal  
Hyperplasia, Alveolar Epithelium  
Inflammation, Chronic

Mammary gland  
Pituitary gland

Cystic Ducts  
Adenoma, Nos

Thyroid  
Unspecified  
Uterus

Multiple Organs Nos

Angiectasis  
C-Cell Carcinoma  
Carcinoma, Nos, Invasive  
Carcinoma, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_671

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
	Cornea	Inflammation, Chronic Diffuse
Intestine Large	Cecum, Colon	Inflammation, Acute Focal
	Cecum, Colon	Necrosis, Focal
Liver		Angiectasis
		Focal Cellular Change
		Metamorphosis, Fatty
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pancreas	Islets	Islet-Cell Carcinoma
Pituitary gland		Angiectasis
		Hemorrhage
Spleen		Angioma
		Hematopoiesis
Stomach		Acanthosis
		Adhesion, Nos
		Necrosis, Diffuse
		Ulcer, Perforated
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Inflammation, Chronic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_672

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Colon	Parasitism
Kidney		Mineralization
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Spleen		Hemosiderosis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_673

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Esophagus		Hyperkeratosis
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change Inflammation, Fibrinous
Lung		Inflammation, Acute Focal Necrosis, Focal
Spleen		Hemosiderosis
Stomach		Acanthosis Hyperkeratosis Inflammation, Chronic Diffuse
Thyroid		Ulcer, Perforated
Unspecified	Mediastinum Nos	Cyst, Follicular Nos Inflammation, Fibrinous

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_674

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Kidney

Liver

Lung

Lymph node

Mammary gland

Pituitary gland

Spleen

Zymbal gland

Tubule

Mesenteric Lymph Node

Cortical Adenoma

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Focal Cellular Change

Granuloma, Nos

Metamorphosis, Fatty

Neoplastic Nodule

Hyperplasia, Alveolar Epithelium

Inflammation, Chronic

Hyperplasia, Reticulum Cell

Cystic Ducts

Fibroadenoma

Adenoma, Nos

Hematopoiesis

Cystic Ducts

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_675

**TRT#:** 1

**DOSE:** 0

**SEX:** Female

**DISP:** Moribund Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Liver

Focal Cellular Change  
Granuloma, Nos

Lung

Metamorphosis, Fatty

Mammary gland

Inflammation, Chronic

Pituitary gland

Cystic Ducts

Spleen

Adenoma, Nos

Hematopoiesis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_676

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Cortical Adenoma

Brain

Cerebrum

Hyperplasia, Focal

Heart

Cerebrum

Hemorrhage

Intestine Large

Myocardium Nos

Necrosis, Focal

Kidney

Colon

Inflammation, Chronic Focal

Liver

Parasitism

Lung

Inflammation, Chronic

Mammary gland

Hepatitis, Toxic

Inflammation, Chronic

Adenocarcinoma, Nos

Adenoma, Nos

Cystic Ducts

Fibroadenoma

Pituitary gland

Adenoma, Nos

Hemorrhage

Spleen

Necrosis, Diffuse

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_677

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Terminal Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
Liver		Metamorphosis, Fatty
Lung		Hyperplasia, Alveolar Epithelium
		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos
		Fibroadenoma
Ovary		Cyst, Follicular Nos
Pancreas	Acinus	Hyperplasia, Focal
Pituitary gland		Cyst, Nos
Thyroid		Cyst, Follicular Nos
Unspecified	Diaphragm Nos	Hernia, Nos
	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_678

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Cecum, Colon	Adenomatous Polyp, Nos
	Colon	Inflammation, Chronic Focal
	Colon	Necrosis, Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Hepatic Lymph Node	Lymphangiectasis
	Ileocolic Lymph Node	Lymphangiectasis
Pituitary gland		Cyst, Nos
Unspecified	Diaphragm Nos	Hernia, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_679

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Medulla

Hyperplasia, Focal  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Focal Cellular Change  
Metamorphosis, Fatty

Lung

Lymph node

Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Cystic Ducts  
Fibroadenoma  
Galactocele

Pituitary gland

Spleen

Adenoma, Nos  
Hematopoiesis  
Hemosiderosis

Stomach

Acanthosis  
Hyperkeratosis

Thyroid

Inflammation, Chronic Diffuse  
Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_680

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Hyperplasia, Nos
Pituitary gland		Angiectasis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_681

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Hepatitis, Toxic

Liver  
Lung  
Lymph node  
Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Hyperplasia, Nos

Ovary  
Unspecified  
Uterus

Multiple Organs Nos

Abscess, Nos  
Leukemia, Monocytic  
Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_682

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts Fibroadenoma
Pancreas		Ectopia
Pituitary gland		Adenoma, Nos
Stomach		Inflammation, Acute Diffuse Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Carcinoma In Situ, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

---

**ANIMAL ID:** 1\_683

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Heart

Cortex Nos

Metamorphosis, Fatty

Kidney

Myocardium Nos

Inflammation, Chronic Focal

Mammary gland

Inflammation, Chronic

Adenocarcinoma, Nos

Cystic Ducts

Fibroadenoma

Pituitary gland

Adenoma, Nos

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Uterus

Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_684

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Intestine Large  
Kidney

Medulla  
Colon

Hyperplasia, Focal  
Parasitism  
Inflammation, Chronic  
Mineralization  
Inflammation, Chronic  
Fibroadenoma  
Hyperplasia, Focal

Lung  
Mammary gland  
Pituitary gland

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_685

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma Papillary Cystadenocarcinoma Nos
Pituitary gland		Adenoma, Nos Angiectasis
Spleen		Hematopoiesis Hemosiderosis
Thyroid		C-Cell Carcinoma Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_686

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
		Neoplastic Nodule
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Preputial gland		Adenoma, Nos
		Cystic Ducts
Spleen		Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_687

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Brain	Cerebellum Nos	Carcinoma, Nos, Invasive
	Cerebrum	Carcinoma, Nos, Invasive
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
Pituitary gland		Carcinoma, Nos
Thyroid		C-Cell Adenoma

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_688

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Bone	Rib	Degeneration, Nos
Brain	Cerebellum Nos	Carcinoma, Nos, Invasive
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Hyperplasia, Alveolar Epithelium
		Pneumonia, Interstitial Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos
		Adenoma, Nos
		Fibroadenoma
Pituitary gland		Carcinoma, Nos
Skin	Cheek Nos	Squamous Cell Carcinoma, Invasive
Spleen		Hematopoiesis
		Hemosiderosis
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Mononuclear Cell
		Squamous Cell Carcinoma, Invasive
Zymbal gland		Squamous Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_689

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Medulla

Hyperplasia, Focal  
Inflammation, Chronic  
Mineralization

Tubule

Lung  
Lymph node  
Mammary gland

Pigmentation, Nos  
Inflammation, Chronic  
Hyperplasia, Reticulum Cell

Mesenteric Lymph Node

Cystic Ducts  
Hyperplasia, Nos  
Angiectasis

Pituitary gland

Hyperplasia, Focal

Skin  
Spleen  
Thyroid

Pelvis

Keratoacanthoma  
Hematopoiesis  
C-Cell Adenoma  
Cyst, Follicular Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_690

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Degeneration, Nos
Bone	Rib	Degeneration, Nos
	Skull	Osteopetrosis
	Sternum	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Focal Cellular Change
		Granuloma, Nos
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Erythrophagocytosis
	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Skin	Ear	Fibrosis, Focal
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Unspecified	Diaphragm Nos	Hernia, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_691

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hemorrhage
Mammary gland		Fibroadenoma
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_692

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic
Liver	Bile Duct	Fibrosis
		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen	Follicles	Atrophy, Nos
		Hemosiderosis
Urinary bladder		Hemorrhage

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_693

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Brain	Cerebrum	Hemorrhage
Eye	Retina	Degeneration, Nos
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Galactocele
		Hyperplasia, Diffuse
Pituitary gland		Adenoma, Nos
Skin	Lower Leg	Basal-Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_694

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Granuloma, Nos
Lung		Congestion, Nos Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis Hemosiderosis
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_695

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla  
Cortex Nos

Hyperplasia, Focal  
Metamorphosis, Fatty  
Pheochromocytoma

Heart  
Kidney

Myocardium Nos

Inflammation, Chronic Focal  
Inflammation, Chronic  
Mineralization

Lung  
Mammary gland  
Spleen

Inflammation, Chronic  
Cystic Ducts  
Hematopoiesis

Stomach

Hemosiderosis  
Acanthosis  
Hyperkeratosis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_696

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Cortex Nos  
Myocardium Nos

Metamorphosis, Fatty  
Inflammation, Chronic Focal  
Inflammation, Chronic

Lung  
Lymph node

Tubule

Pigmentation, Nos  
Inflammation, Chronic

Mammary gland  
Pancreas

Iliac Lymph Node  
Iliac Lymph Node

Hyperplasia, Lymphoid  
Lymphangiectasis

Pituitary gland  
Skin  
Spleen

Islets

Cystic Ducts  
Atrophy, Diffuse  
Hyperplasia, Focal  
Inflammation, Chronic Diffuse

Lower Leg

Hyperplasia, Focal  
Squamous Cell Carcinoma  
Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_697

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Medulla

Hyperplasia, Focal  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos

Liver  
Lung  
Lymph node

Granuloma, Nos  
Inflammation, Chronic

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mesenteric Lymph Node

Pigmentation, Nos

Mammary gland  
Pituitary gland  
Spleen

Cystic Ducts

Stomach

Adenoma, Nos

Uterus

Hemosiderosis

Zymbal gland

Hyperkeratosis

Endometrium

Cyst, Nos

Cystic Ducts

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_698

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
Kidney	Cortex Nos	Metamorphosis, Fatty
		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Focal Cellular Change
Lung		Metamorphosis, Fatty
Lymph node		Inflammation, Chronic
	Mesenteric Lymph Node	Hemorrhage
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Pituitary gland		Adenoma, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_699

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Pigmentation, Nos
Lung		Inflammation, Chronic
Ovary		Cyst, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Endometrium	Cyst, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_700

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Necrosis, Focal
Bone marrow		Hyperplasia, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney	Tubule	Degeneration, Nos
		Inflammation, Chronic
Liver		Focal Cellular Change
		Hepatitis, Toxic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Galactocele
		Inflammation, Acute Diffuse
		Papillary Cystadenoma, Nos
Pituitary gland		Cyst, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Urinary bladder		Hyperplasia, Diffuse
Uterus		Carcinoma, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_701

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Angiectasis
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Pancreas	Islets	Islet-Cell Carcinoma
Pituitary gland		Carcinoma, Nos
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_702

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Angiectasis
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma Hyperplasia, Focal
Pituitary gland		Adenoma, Nos
Preputial gland		Cystic Ducts Hyperkeratosis
Thyroid		Inflammation, Acute Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_703

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pancreas		Atrophy, Focal
Pituitary gland		Adenoma, Nos
Spleen		Angiectasis Hemorrhage Hemosiderosis
Unspecified	Multiple Organs Nos Abdominal Cavity	Necrosis, Focal Leukemia, Monocytic Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_704

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Pancreas		Atrophy, Focal
Pituitary gland		Adenoma, Nos
Skin	Face	Cyst, Epidermal Inclusion
Unspecified	Groin	Lipoma

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_705

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Ileocolic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Spleen		Hemosiderosis
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_706

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
		Inflammation, Interstitial
Mammary gland		Carcinoma, Nos
		Cystic Ducts
Pituitary gland		Adenoma, Nos
Preputial gland		Carcinoma, Nos
		Cystic Ducts
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_707

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Necrosis, Focal
Lung		Hemorrhage
		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_708

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
Lung		Follicular-Cell Carcinoma, Metastatic
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thyroid		Follicular-Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_709

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 0

DISP: Moribund Sacrifice

HISTO:

OBSERVATIONS

Adrenal gland	Cortex Nos Cortex Nos	Hyperplasia, Focal Metamorphosis, Fatty Pheochromocytoma
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Colon Colon	Inflammation, Chronic Focal Parasitism
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule  Bile Duct	Pigmentation, Nos Focal Cellular Change Hemorrhage Inflammation, Chronic Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node Mesenteric Lymph Node	Hyperplasia, Lymphoid Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos Fibroadenoma
Ovary		Thecoma
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Adenoma
Uterus	Endometrium	Hyperplasia, C Cell Cyst, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_710

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Hyperplasia, Nos
Lung		Inflammation, Chronic
Pituitary gland		Cyst, Nos
Spleen		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_711

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos Medulla Cortex Nos	Hyperplasia, Focal Hyperplasia, Focal Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Granuloma, Nos Metamorphosis, Fatty Pigmentation, Nos Inflammation, Chronic
Lung		Atrophy, Nos
Lymph node	Pancreatic Lymph Node Mediastinal Lymph Node Mandibular Lymph Node	Erythrophagocytosis Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_712

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal Pheochromocytoma
Bone	Skull	Osteopetrosis
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma
Ovary		Granulosa-Cell Tumor
Pancreas		Atrophy, Diffuse
Pituitary gland		Adenoma, Nos
Spleen		Fibrosis, Diffuse Hemosiderosis
Thyroid		Follicular-Cell Carcinoma
Unspecified	Multiple Organs Nos	Pigmentation, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_713

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Liver

Necrosis, Focal

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mammary gland

Fibroadenoma

Pituitary gland

Hyperplasia, Focal

Spleen

Hematopoiesis

Uterus

Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_714

TRT#: 1  
DOSE: 0

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST:  
HISTO:

OBSERVATIONS

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Esophagus		Hyperkeratosis
Intestine Small	Mesentery Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Liver		Angiectasis
		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Pancreas		Atrophy, Focal
Spleen		Hemosiderosis
Stomach		Acanthosis
		Adhesion, Nos
		Hyperkeratosis
		Inflammation, Acute Focal
		Necrosis, Focal
Thyroid		Ulcer, Perforated
		C-Cell Adenoma
		Hyperplasia, C Cell
Unspecified	Groin	Fibroma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_715

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Cortex Nos  
Myocardium Nos

Metamorphosis, Fatty  
Inflammation, Chronic Focal  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Angiectasis  
Focal Cellular Change  
Hepatitis, Toxic

Lung  
Mammary gland

Inflammation, Chronic  
Cystic Ducts  
Fibroadenoma

Thyroid  
Unspecified

Multiple Organs Nos

Galactocele  
Hyperplasia, C Cell  
Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_716

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Kidney

Cortex Nos

Metamorphosis, Fatty

Liver

Tubule

Inflammation, Chronic

Lung

Mineralization

Lymph node

Pigmentation, Nos

Focal Cellular Change

Mammary gland

Inflammation, Chronic

Spleen

Mandibular Lymph Node

Hyperplasia, Lymphoid

Thyroid

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Uterus

Fibroadenoma

Hematopoiesis

Hyperplasia, C Cell

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_717

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Liver

Lung  
Lymph node

Mammary gland

Thyroid

Unspecified

Uterus

Tubule

Bile Duct

Mesenteric Lymph Node

Multiple Organs Nos

Endometrium

Pheochromocytoma  
Inflammation, Chronic  
Mineralization  
Pigmentation, Nos  
Focal Cellular Change  
Inflammation, Chronic  
Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Cystic Ducts  
Fibroadenoma  
Cystic Follicles  
Leukemia, Monocytic  
Carcinosarcoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_718

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Lung	Tubule	Pigmentation, Nos
		Hyperplasia, Alveolar Epithelium
Lymph node		Inflammation, Chronic
Mammary gland	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
		Cystic Ducts
Pancreas		Fibroadenoma
Pituitary gland		Acinar-Cell Carcinoma
		Adenoma, Nos
Spleen		Angiectasis
Stomach		Hemosiderosis
Thyroid		Hyperkeratosis
		C-Cell Carcinoma
		Follicular-Cell Adenoma
Unspecified	Diaphragm Nos	Hernia, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_719

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

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**OBSERVATIONS**

Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Lung		Congestion, Nos
		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pituitary gland		Carcinoma, Nos
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_720

**TRT#:** 1  
**DOSE:** 0

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Pancreas		Adenocarcinoma, Nos
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Necrosis, Diffuse
Unspecified	Diaphragm Nos	Hernia, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_721

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Metamorphosis, Fatty

Brain

Cerebrum

Carcinoma, Nos, Invasive

Kidney

Inflammation, Chronic

Tubule

Pigmentation, Nos

Liver

Granuloma, Nos

Lung

Metamorphosis, Fatty

Lymph node

Mesenteric Lymph Node

Inflammation, Chronic

Ovary

Hyperplasia, Reticulum Cell

Pituitary gland

Cyst, Nos

Carcinoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_722

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Brain  
Kidney

Cortex Nos  
Cerebrum

Metamorphosis, Fatty  
Carcinoma, Nos, Invasive  
Inflammation, Chronic  
Mineralization

Tubule

Liver  
Lung  
Mammary gland  
Pituitary gland  
Stomach

Pigmentation, Nos  
Metamorphosis, Fatty  
Inflammation, Chronic  
Cystic Ducts  
Carcinoma, Nos  
Acanthosis  
Hyperkeratosis  
Inflammation, Chronic Focal  
Ulcer, Perforated  
Leukemia, Monocytic

Unspecified

Multiple Organs Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 1\_723

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Myocardium Nos

Tubule

Liver

Lung

Lymph node

Mammary gland

Pituitary gland

Spleen

Uterus

Mesenteric Lymph Node

Pheochromocytoma

Inflammation, Chronic Focal

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Focal Cellular Change

Inflammation, Chronic

Hyperplasia, Reticulum Cell

Cystic Ducts

Angiectasis

Hematopoiesis

Endometrial Stromal Polyp

Inflammation, Chronic Diffuse

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 1\_724

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Tubule

Inflammation, Chronic

Liver

Bile Duct

Pigmentation, Nos

Lymph node

Mandibular Lymph Node

Hyperplasia, Nos

Mammary gland

Hyperplasia, Lymphoid

Thyroid

Fibroadenoma

Unspecified

Multiple Organs Nos

C-Cell Adenoma

Uterus

Leukemia, Monocytic

Endometrial Stromal Polyp

Hemorrhage

Hyperplasia, Papillary

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_001

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
		Fibroadenoma
Pancreas		Atrophy, Focal
		Ectopia
Pituitary gland		Adenoma, Nos
Preputial gland		Squamous Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_002

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Hyperplasia, Tubular Cell Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Angiectasis Cyst, Nos Hyperplasia, Focal
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Unspecified	Abdominal Cavity	Necrosis, Fat
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_003

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Pituitary gland		Carcinoma, Nos
Stomach		Metaplasia, Osseous
Thyroid		Carcinoma, Nos, Metastatic
Vagina		Cystic Follicles Squamous Cell Papilloma

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**PRIMARY CAUSE OF DEATH** -

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_004

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Unspecified	Tail	Fibrosarcoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_005

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Eye

Cortex Nos

Metamorphosis, Fatty

Intestine Large

Retina

Cataract

Kidney

Cecum, Colon

Degeneration, Nos

Cecum, Colon

Fibrosis, Focal

Necrosis, Focal

Lung

Mammary gland

Tubule

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Inflammation, Chronic

Cystic Ducts

Fibroadenoma

Hyperplasia, Nos

Unspecified

Multiple Organs Nos

Lymphoma, Undifferentiated-Malignant Type

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_006

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
		Pigmentation, Nos
Lung		Alveolar/Bronchiolar Carcinoma
Pituitary gland		Cyst, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_007

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Granuloma, Nos Metamorphosis, Fatty
Liver		Inflammation, Chronic
Lung		Hyperplasia, Reticulum Cell
Lymph node	Mesenteric Lymph Node	Cystic Ducts Fibroadenoma
Mammary gland		Islet-Cell Adenoma Islet-Cell Carcinoma
Pancreas	Islets Islets	Adenoma, Nos
Pituitary gland		Hematopoiesis
Spleen		Hemosiderosis
Stomach		Acanthosis Hyperkeratosis
Thyroid		Inflammation, Chronic Diffuse C-Cell Adenoma C-Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_008

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Brain	Cerebrum	Astrocytoma
Eye		Cataract
	Retina	Degeneration, Nos
		Hemorrhage
		Synechia, Posterior
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Unspecified	Diaphragm Nos	Hernia, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_009

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart		C-Cell Carcinoma, Metastatic
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		C-Cell Carcinoma, Metastatic
		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Erythrophagocytosis
Mammary gland		Fibroadenoma
Pituitary gland		Cyst, Hemorrhagic
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Trachea		C-Cell Carcinoma, Invasive

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_00A

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Heart  
Intestine Small

Cortex Nos  
Myocardium Nos  
Mesentery Nos  
Duodenum

Metamorphosis, Fatty  
Inflammation, Chronic Diffuse  
Periarteritis

Kidney  
Liver

Bile Duct

Ulcer, Perforated  
Mineralization  
Granuloma, Nos  
Inflammation, Chronic  
Metamorphosis, Fatty  
Hyperplasia, Alveolar Epithelium

Lung

Inflammation, Chronic

Pancreas  
Preputial gland  
Spleen  
Stomach

Periarteritis  
Carcinoma, Nos  
Hematopoiesis  
Acanthosis  
Hyperkeratosis  
Periarteritis

Unspecified

Adipose Tissue

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_010

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Metamorphosis, Fatty Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Adenocarcinoma, Nos Cystic Ducts Fibroadenoma Hyperplasia, Diffuse
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_011

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pancreas		Atrophy, Focal
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp Hemorrhage Hydrometra

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_012

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Atrophy, Nos

Hyperplasia, Focal

Pheochromocytoma

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Inflammation, Chronic

Lung

Fibroadenoma

Mammary gland

Atrophy, Diffuse

Pancreas

Angiectasis

Pituitary gland

Acanthosis

Stomach

Hyperkeratosis

Inflammation, Chronic Diffuse

Thyroid

Hyperplasia, C Cell

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_013

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Ovary		Cyst, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_014

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenoma, Nos
		Hyperplasia, Diffuse
Pancreas	Islets	Islet-Cell Carcinoma
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Spleen		Hemosiderosis
Stomach		Acanthosis Hyperkeratosis
		Necrosis, Focal
Thyroid		Hyperplasia, C Cell
Uterus	Cervix Uteri	Abscess, Nos
	Cervix Uteri	Acanthosis
	Cervix Uteri	Carcinoma In Situ, Nos
	Cervix Uteri	Hyperkeratosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_015

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Preputial gland		Squamous Cell Papilloma
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_016

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Cortical Adenoma Metamorphosis, Fatty Pheochromocytoma
Eye	Retina	Cataract Degeneration, Nos
Intestine Large	Colon	Parasitism Inflammation, Chronic
Kidney	Tubule	Mineralization Pigmentation, Nos Necrosis, Focal Inflammation, Chronic
Liver		Cystic Ducts Fibroadenoma
Lung		Squamous Cell Carcinoma, Invasive
Mammary gland		Squamous Cell Carcinoma
Salivary gland		Hyperplasia, C Cell
Skin		Leukemia, Monocytic
Thyroid		Hydrometra
Unspecified	Multiple Organs Nos	
Uterus		

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_018

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Brain	Cerebellum Nos	Carcinoma, Nos, Invasive
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Mesenteric Lymph Node	Pigmentation, Nos
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
Pituitary gland		Carcinoma, Nos
Preputial gland		Abscess, Nos
		Carcinoma, Nos
Spleen		Hematopoiesis
		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
Unspecified	Axilla	Lipoma
Zymbal gland		Cystic Ducts

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_019

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Intestine Large	Descending, Colon	Adenomatous Polyp, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
		Pigmentation, Nos
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
		Galactocele
Skin		Keratoacanthoma
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_020

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain	Cerebrum	Astrocytoma
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Ovary		Granulosa-Cell Tumor
Pancreas		Atrophy, Focal
Pituitary gland		Adenoma, Nos
Spleen		Fibrosis, Focal
		Hematopoiesis
		Hemorrhage
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Hydrometra

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_021

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Hepatic Lymph Node	Hyperplasia, Reticulum Cell
	Hepatic Lymph Node	Pigmentation, Nos
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute Focal
		Inflammation, Chronic Diffuse
		Necrosis, Focal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_022

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Metamorphosis, Fatty Necrosis, Focal Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Cervical Lymph Node Nos	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts Fibroadenoma Hyperplasia, Diffuse
Pituitary gland		Adenoma, Nos Angiectasis
Spleen		Hemosiderosis
Stomach		Acanthosis Adhesion, Nos Hyperkeratosis Inflammation, Chronic Diffuse Ulcer, Perforated

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_023

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos Medulla Cortex Nos	Degeneration, Nos Hyperplasia, Focal Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Renal Lymph Node Mediastinal Lymph Node	Adenocarcinoma, Nos, Metastatic Congestion, Nos
Mammary gland		Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Unspecified	Diaphragm Nos	Hernia, Nos
Uterus		Adenocarcinoma, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_024

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Bone	Skull	Osteopetrosis
Brain	Cerebrum	Hemorrhage
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
		Galactocele
		Hyperplasia, Nos
		Papillary Cystadenoma, Nos
Pituitary gland		Cyst, Nos
Stomach		Acanthosis
	Submucosa	Edema, Nos
		Hyperkeratosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
	Abdominal Cavity	Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_025

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_026

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain	Cerebrum	Gliosis
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Erythrophagocytosis
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
		Cyst, Nos
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_027

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Intestine Large

Kidney

Liver

Lung

Mammary gland

Pituitary gland

Spleen

Colon

Colon

Colon

Tubule

Cortical Adenoma

Edema, Nos

Inflammation, Acute Focal

Necrosis, Focal

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Metamorphosis, Fatty

Mitotic Alteration

Inflammation, Chronic

Fibroadenoma

Galactocele

Hyperplasia, Diffuse

Adenoma, Nos

Hematopoiesis

Hemosiderosis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_028

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Brain	Cerebellum Nos	Hemorrhage
	Cerebrum	Hemorrhage
	Cerebrum	Meningioma
	Cerebellum Nos	Necrosis, Focal
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver		Focal Cellular Change
		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Galactocele
Ovary		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Necrosis, Focal
Thyroid		Hyperplasia, C Cell
Zymbal gland		Cystic Ducts

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_029

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Hepatitis, Toxic
Lymph node	Mediastinal Lymph Node	Congestion, Nos
Mammary gland		Fibroadenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_030

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Brain	Cerebrum	Astrocytoma
Kidney		Mineralization
Lung		Inflammation, Chronic
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_031

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mammary gland

Cystic Ducts

Pituitary gland

Hyperplasia, Focal

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_032

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Lymph node	Mediastinal Lymph Node	Erythrophagocytosis
	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Pigmentation, Nos
Preputial gland		Cystic Ducts
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Angiectasis

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_033

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
Esophagus		Hyperkeratosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Chronic Focal
Thyroid		C-Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_034

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Colon	Parasitism
Intestine Small	Duodenum	Leiomyosarcoma
Kidney		Inflammation, Chronic
	Tubule	Mineralization
Liver		Pigmentation, Nos
Lung		Necrosis, Focal
Lymph node		Inflammation, Chronic
Mammary gland	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pituitary gland		Fibroadenoma
Uterus		Cyst, Nos
		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_035

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney

Liver

Lung

Inflammation, Chronic

Focal Cellular Change

Congestion, Nos

Hemorrhage

Lymph node

Pituitary gland

Spleen

Thyroid

Mesenteric Lymph Node

Inflammation, Chronic

Hyperplasia, Reticulum Cell

Hemorrhage

Hemosiderosis

Cyst, Follicular Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_036

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Inflammation, Chronic
Lung		Hyperplasia, Reticulum Cell
Lymph node	Mesenteric Lymph Node	Cystic Ducts
Mammary gland		Adenoma, Nos
Pituitary gland		Abscess, Nos
Skin	Groin	Inflammation, Chronic Focal Acanthosis Hyperkeratosis
Stomach		Inflammation, Chronic Diffuse Hyperplasia, C Cell
Thyroid		

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_038

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Tubule

Liver

Pigmentation, Nos  
Hepatitis, Toxic  
Pigmentation, Nos

Lung

Inflammation, Chronic

Pituitary gland

Adenoma, Nos

Spleen

Follicles

Atrophy, Nos

Stomach

Fibrosis, Diffuse

Acanthosis

Hyperkeratosis

Inflammation, Chronic Focal

Unspecified

Multiple Organs Nos

Necrosis, Focal

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_039

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Focal Cellular Change
Liver		Inflammation, Chronic
Lung		Hyperplasia, Reticulum Cell
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Cystic Ducts
Mammary gland		Cyst, Parovarian
Ovary		Adenoma, Nos
Pituitary gland		Angiectasis
Spleen		Hemosiderosis
Stomach		Acanthosis Hyperkeratosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_040

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
		Angiectasis
Stomach		Acanthosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_041

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse Thrombosis, Nos
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts Fibroadenoma
		Galactocele
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_042

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Metamorphosis, Fatty Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Hyperkeratosis Inflammation, Chronic Focal Necrosis, Focal
Tongue		Ulcer, Perforated
Zymbal gland		Squamous Cell Carcinoma Cystic Ducts

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_043

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Angiectasis
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Hyperplasia, Nos
		Osteosarcoma, Metastatic
Lung		Inflammation, Chronic
		Osteosarcoma, Metastatic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Spleen		Hemorrhage
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Endometrium	Cyst, Nos
Zymbal gland		Abscess, Nos
		Squamous Cell Papilloma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_044

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain	Cerebrum	Hemorrhage
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Pancreas	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Stomach		Acanthosis
		Hyperkeratosis
Unspecified	Multiple Sites Nos	Lymphoma, Histiocytic-Malignant Type
Uterus		Hydrometra

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_045

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Hepatitis, Toxic
Liver		Inflammation, Chronic
Lung		Adenoma, Nos
Pituitary gland		Necrosis, Focal
Spleen		Necrosis, Focal
Stomach		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_046

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Hepatitis, Toxic  
Pigmentation, Nos

Lung

Mammary gland

Inflammation, Chronic  
Cystic Ducts  
Fibroadenoma

Pituitary gland

Unspecified

Zymbal gland

Multiple Organs Nos

Adenoma, Nos  
Leukemia, Monocytic  
Cystic Ducts

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_047

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Metamorphosis, Fatty
		Mineralization
Liver	Tubule	Pigmentation, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Galactocele
		Hyperplasia, Diffuse
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_048

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Metamorphosis, Fatty

Pheochromocytoma

Heart

Myocardium Nos

Inflammation, Chronic Focal

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Liver

Hepatitis, Toxic

Lung

Inflammation, Chronic

Pancreas

Ectopia

Spleen

Fibrosis, Focal

Thyroid

Hyperplasia, C Cell

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_049

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Kidney

Medulla

Hyperplasia, Focal  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Focal Cellular Change

Liver  
Lung  
Lymph node  
Mammary gland  
Spleen  
Thyroid

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Fibroadenoma  
Hematopoiesis  
Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_050

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Brain	Cerebrum	Carcinoma, Nos, Invasive
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Metamorphosis, Fatty Necrosis, Focal
Lung		Inflammation, Chronic
Mammary gland		Adenoma, Nos Cystic Ducts Fibroadenoma Galactocele
Pancreas		Atrophy, Focal
Pituitary gland		Carcinoma, Nos
Spleen		Hematopoiesis
Stomach		Acanthosis Hyperkeratosis Inflammation, Chronic Diffuse
Thyroid		Ulcer, Perforated C-Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_051

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Lung

Myocardium Nos

Pheochromocytoma

Inflammation, Chronic Focal

Mineralization

Congestion, Nos

Inflammation, Chronic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

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<b>ANIMAL ID:</b> 2_052	<b>TRT#:</b> 2 <b>DOSE:</b> 10000 PPM	<b>SEX:</b> Female <b>DISP:</b> Moribund Sacrifice	<b>DAY ON TEST:</b> <b>HISTO:</b>
<hr/> <b>OBSERVATIONS</b>			
Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma	
Eye	Retina	Degeneration, Nos	
Heart	Myocardium Nos	Inflammation, Chronic Focal	
Intestine Small	Mesentery Nos	Inflammation, Chronic Focal	
Kidney		Inflammation, Chronic	
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Metamorphosis, Fatty Pigmentation, Nos	
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid	
Mammary gland		Fibroadenoma	
Ovary		Cyst, Follicular Nos	
Salivary gland		Inflammation, Chronic Diffuse	
Skin	Nose	Acanthosis	
Stomach		Acanthosis Hyperkeratosis Inflammation, Chronic Diffuse	
Thyroid		C-Cell Adenoma Follicular-Cell Adenoma	
Unspecified	Ear Multiple Organs Nos	Inflammation, Chronic Focal Leukemia, Monocytic	
<hr/> <b>PRIMARY CAUSE OF DEATH</b>			
-			

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_053

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver		Angiectasis
		Focal Cellular Change
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
		Galactocele
Pituitary gland		Cyst, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Inflammation, Chronic Focal

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_054

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Pituitary gland		Angiectasis Hyperplasia, Focal
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
	Multiple Organs Nos	Pigmentation, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_055

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Metamorphosis, Fatty  
Pigmentation, Nos

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mammary gland

Adenocarcinoma, Nos

Pituitary gland

Adenoma, Nos

Angiectasis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_056

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos
	Bile Duct	Inflammation, Chronic Metamorphosis, Fatty Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis Hemosiderosis
Thyroid		C-Cell Adenoma
Unspecified	Mediastinum Nos	Periarteritis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_057

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Metamorphosis, Fatty

Liver  
Lung  
Lymph node  
Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Cystic Ducts  
Fibroadenoma  
Acanthosis  
Hyperkeratosis  
Inflammation, Chronic Diffuse  
Necrosis, Diffuse  
Ulcer, Perforated  
Follicular-Cell Adenoma

Stomach

Thyroid

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_058

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Metamorphosis, Fatty

Brain

Cerebellum Nos

Carcinoma, Nos, Invasive

Eye

Retina

Degeneration, Nos

Kidney

Cornea

Inflammation, Chronic Focal

Liver

Inflammation, Chronic

Metamorphosis, Fatty

Lung

Necrosis, Focal

Inflammation, Chronic

Mammary gland

Cystic Ducts

Fibroadenoma

Hyperplasia, Nos

Pituitary gland

Carcinoma, Nos

Stomach

Acanthosis

Hyperkeratosis

Inflammation, Chronic Diffuse

Unspecified

Multiple Organs Nos

Leukemia, Mononuclear Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_059

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Metamorphosis, Fatty
		Mineralization
		Nephrosis, Nos
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Spleen		Hemosiderosis
Thyroid		Cyst, Follicular Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_060

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Bone marrow		Hyperplasia, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Hepatitis, Toxic Necrosis, Focal
Lung		Inflammation, Chronic Inflammation, Interstitial
Mammary gland		Cystic Ducts Fibroadenoma
Pituitary gland		Gliosis
Spleen		Fibrosis, Focal
Thyroid		Cyst, Follicular Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_061

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Brain	Cerebrum	Astrocytoma
Intestine Small	Jejunum	Mucinous Cystadenocarcinoma
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Metamorphosis, Fatty
		Necrosis, Focal
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
Pituitary gland		Angiectasis
Stomach		Hyperkeratosis
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_062

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos Pigmentation, Nos
Lung	Bronchus	Bronchiectasis Inflammation, Chronic Pneumonia, Aspiration
Lymph node	Mediastinal Lymph Node Mesenteric Lymph Node Mediastinal Lymph Node	Erythrophagocytosis Hyperplasia, Reticulum Cell Pigmentation, Nos
Mammary gland		Cystic Ducts Fibroadenoma Galactocele Hyperplasia, Nos
Pituitary gland		Adenoma, Nos Angiectasis Hyperplasia, Focal
Spleen		Hematopoiesis Hemosiderosis
Thyroid		Hyperplasia, C Cell
Uterus	Endometrium	Cyst, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_063

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
		Necrosis, Focal
		Neoplastic Nodule
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_064

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Inflammation, Chronic
Lung		Hyperplasia, Reticulum Cell
Lymph node	Mesenteric Lymph Node	Adenoma, Nos Cystic Ducts Galactocele
Mammary gland		Adenoma, Nos Carcinoma, Nos
Pituitary gland		Fibrosis, Focal
Preputial gland		Leukemia, Monocytic
Spleen		
Unspecified	Multiple Organs Nos	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_065

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Galactocele
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_066

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos

Lung

Inflammation, Chronic

Pituitary gland

Adenoma, Nos

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

ANIMAL ID: 2_067	TRT#: 2 DOSE: 10000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: HISTO:
<b>OBSERVATIONS</b>			
Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma	
Brain	Cerebrum	Carcinoma, Nos, Invasive	
Eye		Cataract	
	Retina	Degeneration, Nos	
Heart	Myocardium Nos	Inflammation, Chronic Diffuse	
Kidney		Inflammation, Chronic Mineralization	
	Tubule	Pigmentation, Nos	
Liver		Hepatitis, Toxic Metamorphosis, Fatty Pigmentation, Nos	
Lung		Inflammation, Chronic	
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos	
Mammary gland		Cystic Ducts	
Pancreas		Ectopia	
Pituitary gland		Carcinoma, Nos	
Stomach		Acanthosis Hyperkeratosis	
		Inflammation, Chronic Diffuse	
		Necrosis, Focal	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_068

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Colon	Parasitism
Kidney		Mineralization
Liver		Metamorphosis, Fatty
		Necrosis, Focal
Lung		Adenocarcinoma, Nos, Metastatic
		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Lymphoid
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_069

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Pituitary gland		Adenoma, Nos
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
Thyroid		Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_070

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Cataract
		Degeneration, Nos
Heart	Myocardium Nos	Synechia, Posterior
Kidney		Inflammation, Chronic Diffuse
		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Granuloma, Nos
		Leukocytosis, Nos
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hematopoiesis

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_071

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Skin	Groin	Cyst, Epidermal Inclusion
Spleen		Hematopoiesis
Uterus		Thrombosis, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_072

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone	Skull	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
		Galactocele
Pituitary gland		Hyperplasia, Focal
Preputial gland		Squamous Cell Carcinoma
Spleen		Hematopoiesis
Uterus	Endometrium	Hyperplasia, Focal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_074

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Adenoma, Nos
		Cystic Ducts
		Fibroadenoma
		Galactocele
Pituitary gland		Adenoma, Nos
Stomach		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_075

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
		Hemorrhage
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_076

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Eye		Cataract
	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Preputial gland		Carcinoma, Nos
Skin		Abscess, Nos
Spleen		Hematopoiesis
		Hemosiderosis
Thyroid		Follicular-Cell Carcinoma
		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_077

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Inflammation, Chronic

Lung  
Lymph node  
Ovary

Mediastinal Lymph Node

Pigmentation, Nos  
Cyst, Parovarian

Pituitary gland  
Preputial gland

Adenoma, Nos  
Hyperkeratosis  
Squamous Cell Carcinoma

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_078

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Bone	Sternum	Osteopetrosis
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Pancreas		Atrophy, Diffuse
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Skin	Hip	Acanthosis
Spleen		Hematopoiesis
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_079

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
		Galactocele
		Hyperplasia, Nos
Pituitary gland		Angiectasis
		Cyst, Nos
		Hyperplasia, Focal
Stomach		Necrosis, Focal
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_080

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Eye		Cataract
	Retina	Degeneration, Nos
		Hemorrhage
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts
		Fibroadenoma
		Fibrosarcoma
		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
		Angiectasis
Stomach		Acanthosis
		Hemorrhage
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
Thyroid		Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_081

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Cortex Nos

Metamorphosis, Fatty

Esophagus

Hyperkeratosis

Eye

Retina

Degeneration, Nos

Heart

Myocardium Nos

Inflammation, Chronic Focal

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Liver

Metamorphosis, Fatty

Lung

Inflammation, Chronic

Mammary gland

Fibroadenoma

Pituitary gland

Adenoma, Nos

Spleen

Hematopoiesis

Stomach

Hyperkeratosis

Thyroid

Ulcer, Perforated

Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_082

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Pancreas	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Hyperplasia, Focal
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
Thyroid		Ulcer, Perforated
		Cystic Follicles
		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_083

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Spleen		Hematopoiesis
		Hemosiderosis
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_084

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Cortical Adenoma Pheochromocytoma
Eye	Retina	Degeneration, Nos Phthisis Bulbi
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts Fibroadenoma Hyperplasia, Diffuse
Pituitary gland		Angiectasis
Thymus		Lymphoma, Undifferentiated-Malignant Type

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_085

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Brain	Cerebrum	Carcinoma, Nos, Invasive
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Carcinoma, Nos
Spleen		Hematopoiesis
		Hemosiderosis
Stomach		Ulcer, Perforated
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_086

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Hepatitis, Toxic Pigmentation, Nos
Liver		Inflammation, Chronic
Lung		Cystic Ducts
Mammary gland		Fibroadenoma
Spleen		Fibrosis, Focal
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_087

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Intestine Large  
Kidney

Colon

Parasitism  
Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Focal Cellular Change  
Inflammation, Chronic  
Hematopoiesis  
Endometrial Stromal Polyp

Liver  
Lung  
Spleen  
Uterus

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_088

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Pancreas		Atrophy, Diffuse
Stomach		Acanthosis
		Hyperkeratosis
		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_089

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic  
Mineralization

Liver  
Lung

Tubule

Pigmentation, Nos  
Granuloma, Nos  
Granuloma, Nos  
Inflammation, Chronic

Mammary gland  
Spleen  
Thyroid  
Uterus

Fibroadenoma  
Hematopoiesis  
C-Cell Adenoma  
Endometrial Stromal Polyp  
Inflammation, Acute  
Cystic Ducts

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Zymbal gland

**PRIMARY CAUSE OF DEATH**

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-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 2\_090

TRT#: 2

SEX: Female

DAY ON TEST:

DOSE: 10000 PPM

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Degeneration, Nos
Brain	Cerebrum	Carcinoma, Nos, Invasive
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Transitional-Cell Carcinoma
		Focal Cellular Change
		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
		Pigmentation, Nos
Lung		C-Cell Carcinoma, Metastatic
		Inflammation, Chronic
Lymph node	Cervical Lymph Node Nos	C-Cell Carcinoma, Metastatic
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
Pancreas	Islets	Hyperplasia, Focal
Pituitary gland		Carcinoma, Nos
Spleen		Hematopoiesis
		Hemosiderosis
Thyroid		C-Cell Carcinoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_091

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic  
Mineralization

Liver

Tubule  
Bile Duct

Pigmentation, Nos  
Inflammation, Chronic  
Pigmentation, Nos

Lung  
Mammary gland  
Thyroid

Inflammation, Chronic  
Fibroadenoma  
C-Cell Carcinoma

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_092

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
		Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
		Hyperplasia, Megakaryocytic
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Ulcer, Perforated
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_093

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Lung		Pneumonia, Aspiration
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_094

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Brain	Cerebrum	Carcinoma, Nos, Invasive
	Cerebrum	Gliosis
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Galactocele
Pituitary gland		Carcinoma, Nos
Spleen		Hemosiderosis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_095

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Mammary gland		Cystic Ducts
Spleen	Capsule	Fibrosis, Focal
		Metaplasia, Osseous
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_096

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Granuloma, Nos Metamorphosis, Fatty Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pituitary gland		Angiectasis
Spleen		Hyperplasia, Focal Hemosiderosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 2\_097

TRT#: 2

SEX: Female

DAY ON TEST:

DOSE: 10000 PPM

DISP: Terminal Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Cyst, Nos
		Focal Cellular Change
		Granuloma, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thymus		Teratoma, Benign
Thyroid		C-Cell Carcinoma
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 2\_098

TRT#: 2

SEX: Female

DAY ON TEST:

DOSE: 10000 PPM

DISP: Terminal Sacrifice

HISTO:

OBSERVATIONS

Adrenal gland		Cortical Adenoma
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Harderian gland	Harderian Gland	Inflammation, Acute Diffuse
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver		Granuloma, Nos
		Metamorphosis, Fatty
		Necrosis, Focal
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Ovary		Cyst, Follicular Nos
Pituitary gland		Adenoma, Nos
Skin	Tail	Acanthosis
	Tail	Hyperkeratosis
Spleen	Follicles	Atrophy, Nos
		Fibrosis, Diffuse
		Metamorphosis, Fatty
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_099

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Adenoma, Nos
		Fibroadenoma
		Galactocele
		Hyperplasia, Nos
Pancreas		Inflammation, Chronic Diffuse
Pituitary gland		Adenoma, Nos
Spleen		Inflammation, Chronic Focal
		Necrosis, Focal
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_100

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Lung

Lymph node

Mammary gland

Preputial gland

Spleen

Mandibular Lymph Node

Mineralization

Inflammation, Chronic

Hyperplasia, Lymphoid

Cystic Ducts

Carcinoma, Nos

Hematopoiesis

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_101

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos
	Bile Duct	Inflammation, Chronic Metamorphosis, Fatty Necrosis, Focal Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos Angiectasis
Preputial gland		Keratoacanthoma
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_102

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Eye	Retina Cornea	Degeneration, Nos Inflammation, Chronic Focal
Intestine Small	Jejunum	Adenocarcinoma In Adenomatous Polyp
Kidney		Inflammation, Chronic Mineralization
Liver		C-Cell Carcinoma, Metastatic Focal Cellular Change
	Bile Duct	Inflammation, Chronic Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Cervical Lymph Node Nos	C-Cell Carcinoma, Metastatic
Mammary gland		Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Uterus	Endometrium	Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_103

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos
Liver	Bile Duct	Hyperplasia, Nos Islet-Cell Carcinoma, Metastatic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis Hemosiderosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_104

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Focal Cellular Change
		Granuloma, Nos
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Pancreas	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Skin	Eyelid Nos	Squamous Cell Carcinoma
Spleen		Hemosiderosis
Thyroid		C-Cell Adenoma
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_105

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
		Neoplastic Nodule
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenoma, Nos
		Cystic Ducts
		Fibroadenoma
Pituitary gland		Angiectasis
Preputial gland		Squamous Cell Carcinoma
Skin		Squamous Cell Papilloma
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_106

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Fibrosis
	Bile Duct	Hyperplasia, Nos
		Metamorphosis, Fatty
		Necrosis, Focal
		Pigmentation, Nos
Lung		Inflammation, Chronic
Ovary		Granulosa-Cell Tumor
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
		Ulcer, Perforated
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
	Abdominal Cavity	Necrosis, Fat

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_107

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos Cortex Nos Medulla Cortex Nos	Degeneration, Nos Hyperplasia, Focal Hyperplasia, Focal Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Hepatitis, Toxic Pigmentation, Nos Inflammation, Chronic
Lung		Hyperplasia, Reticulum Cell
Lymph node	Mesenteric Lymph Node	Cystic Ducts
Mammary gland		Adenoma, Nos
Pituitary gland		Hemosiderosis
Spleen		Necrosis, Focal
Stomach		Leukemia, Monocytic
Unspecified	Multiple Organs Nos	

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_108

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
Lung		Inflammation, Chronic
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_109

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart Myocardium Nos Hyperplasia, Focal  
Inflammation, Chronic Diffuse

Kidney Inflammation, Chronic

Mineralization

Liver Tubule Pigmentation, Nos

Focal Cellular Change

Hematopoiesis

Lung Inflammation, Chronic

Lymph node Mesenteric Lymph Node Hyperplasia, Reticulum Cell

Mammary gland Fibroadenoma

Pancreas Acinar-Cell Adenoma

Pituitary gland Cyst, Nos

Preputial gland Carcinoma, Nos

Spleen Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_110

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic Necrosis, Focal
Lung		Inflammation, Chronic
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
		Hemorrhage
Spleen		Hemosiderosis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_111

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Bone	Rib	Osteosarcoma
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Ovary		Cyst, Nos
Pituitary gland		Hyperplasia, Focal
Preputial gland		Keratoacanthoma
Spleen		Hematopoiesis
Unspecified	Axilla	Fibroma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_112

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Intestine Large  
Kidney

Colon

Parasitism  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Focal Cellular Change  
Hemorrhage

Lung  
Lymph node  
Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Adenocarcinoma, Nos

Ovary  
Pituitary gland  
Skin  
Spleen

Mesothelioma, Nos  
Adenoma, Nos  
Squamous Cell Carcinoma  
Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_113

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Hematopoiesis Pigmentation, Nos
Lung		Adenocarcinoma, Nos, Metastatic Inflammation, Chronic
Lymph node	Mesenteric Lymph Node Pancreatic Lymph Node	Hyperplasia, Reticulum Cell Pigmentation, Nos
Mammary gland		Abscess, Nos Adenocarcinoma, Nos Fibroadenoma
Pituitary gland		Cyst, Nos
Spleen		Hematopoiesis Hemosiderosis
Stomach		Necrosis, Focal
Thyroid		C-Cell Adenoma Cyst, Follicular Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_114

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland	Mediastinal Lymph Node	Pigmentation, Nos Fibroadenoma Galactocele Papillary Cystadenoma, Nos
Spleen		Hemosiderosis
Unspecified		Fibrosarcoma
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_115

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Brain	Cerebellum Nos	Meningioma
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
Liver	Bile Duct	Fibrosis
		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Galactocele
Pituitary gland		Angiectasis
Spleen		Hemosiderosis
Stomach		Hyperkeratosis
Thyroid		Cyst, Follicular Nos
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_116

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos Cortex Nos	Hyperplasia, Focal Metamorphosis, Fatty Pheochromocytoma
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Adenocarcinoma, Nos Cystic Ducts Fibroadenoma
Pituitary gland		Adenoma, Nos
Skin	Chest	Trichoepithelioma
Unspecified	Diaphragm Nos Multiple Organs Nos	Hernia, Nos Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_117

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
		Galactocele
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_118

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma, Malignant
Bone	Skull	Osteopetrosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization Pheochromocytoma, Metastatic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Pheochromocytoma, Metastatic
Mammary gland		Adenocarcinoma, Nos Cystic Ducts Fibroadenoma Galactocele
Pituitary gland		Adenoma, Nos Angiectasis
Spleen		Hematopoiesis
Stomach		Acanthosis Hyperkeratosis Inflammation, Chronic Diffuse
Unspecified	Abdominal Cavity	Ulcer, Perforated Pheochromocytoma, Invasive

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_119

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Bone marrow  
Kidney

Hypoplasia, Nos  
Inflammation, Chronic  
Mineralization

Tubule

Lung  
Mammary gland  
Pituitary gland

Pigmentation, Nos  
Inflammation, Chronic  
Fibroadenoma  
Adenoma, Nos  
Angiectasis

Thyroid  
Unspecified

Multiple Organs Nos

Hyperplasia, C Cell  
Leukemia, Myelomonocytic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_120

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Kidney		Inflammation, Chronic Mineralization
Lymph node	Tubule Pancreatic Lymph Node Mesenteric Lymph Node Pancreatic Lymph Node	Pigmentation, Nos Hyperplasia, Lymphoid Hyperplasia, Reticulum Cell Lymphangiectasis
Mammary gland		Cystic Ducts Fibroadenoma
Pancreas	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Angiectasis Hyperplasia, Focal
Stomach		Squamous Cell Carcinoma
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Endometrium	Hyperplasia, Papillary

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_121

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Metamorphosis, Fatty  
Inflammation, Chronic

Liver  
Lung  
Mammary gland

Tubule

Pigmentation, Nos  
Hepatitis, Toxic

Spleen  
Thyroid  
Unspecified  
Uterus

Multiple Organs Nos

Inflammation, Chronic  
Cystic Ducts  
Fibroadenoma  
Hyperplasia, Focal  
Fibrosis, Focal  
Follicular-Cell Carcinoma  
Leukemia, Monocytic  
Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_122

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_123

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:04

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 2\_124

TRT#: 2

SEX: Female

DAY ON TEST:

DOSE: 10000 PPM

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cyst, Nos
Preputial gland		Abscess, Nos Adenoma, Nos
		Cystic Ducts
Spleen		Hematopoiesis
Stomach		Acanthosis Inflammation, Chronic Diffuse Necrosis, Focal
Thyroid		Hyperplasia, C Cell
Unspecified	Diaphragm Nos	Hernia, Nos
	Neck	Osteosarcoma
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_125

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Metamorphosis, Fatty

Pheochromocytoma

Brain

Hemorrhage

Heart

Myocardium Nos

Inflammation, Chronic Diffuse

Kidney

Inflammation, Chronic

Tubule

Pigmentation, Nos

Lung

Inflammation, Chronic

Mammary gland

Cystic Ducts

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Uterus

Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_126

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Kidney	Tubule	Inflammation, Acute Focal Pigmentation, Nos
Liver		Hepatitis, Toxic
Lymph node	Mediastinal Lymph Node	Inflammation, Acute
	Mesenteric Lymph Node	Inflammation, Acute
	Pancreatic Lymph Node	Inflammation, Acute Diffuse
	Renal Lymph Node	Inflammation, Acute Diffuse Necrosis, Diffuse
Mammary gland		Fibroadenoma
Salivary gland		Abscess, Nos
Stomach		Acanthosis Hyperkeratosis Necrosis, Focal
Thyroid		C-Cell Adenoma
Unspecified	Mediastinum Nos	Inflammation, Acute Diffuse
	Multiple Organs Nos	Inflammation, Chronic
	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Fibrosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_127

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Small	Mesentery Nos	Inflammation, Acute Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Necrosis, Focal
		Neoplastic Nodule
Lung	Pleura Nos	Inflammation, Acute Focal
		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Adenoma, Nos
Ovary		Inflammation, Acute Diffuse
Peritoneum		Inflammation, Nos
Pituitary gland		Hyperplasia, Focal
Spleen	Capsule	Fibrosis, Multifocal
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp
	Cervix Uteri	Fibrosis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_128

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Preputial gland		Squamous Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_129

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Pituitary gland		Hyperplasia, Focal
Thyroid		Hyperplasia, C Cell
Zymbal gland		Cystic Ducts

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_130

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

**ANIMAL ID:** 2\_131

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Colon	Parasitism
Kidney		Mineralization
Lung		Granulosa-Cell Carcinoma, Metastatic
		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hemorrhage
Mammary gland		Cystic Ducts
Ovary		Granulosa-Cell Carcinoma
Skin	Perineum	Squamous Cell Carcinoma
Spleen		Hematopoiesis
Stomach		Acanthosis
		Hyperkeratosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_132

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney  
Lung  
Mammary gland

Cortex Nos  
Myocardium Nos

Metamorphosis, Fatty  
Inflammation, Chronic Diffuse  
Inflammation, Chronic  
Inflammation, Chronic  
Adenocarcinoma, Nos  
Cystic Ducts  
Fibroadenoma  
Hyperplasia, Nos  
Acanthosis  
Hyperkeratosis  
Inflammation, Chronic Diffuse  
Necrosis, Focal  
Leukemia, Monocytic  
Squamous Cell Carcinoma

Stomach

Unspecified  
Zymbal gland

Multiple Organs Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:04  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_133

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Granuloma, Nos Hemorrhage Metamorphosis, Fatty Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:04

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

**Lab:** NA

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**ANIMAL ID:** 2\_134

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Intestine Large  
Kidney

Transverse Colon, Colon

Adenomatous Polyp, Nos  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Focal Cellular Change  
Granuloma, Nos  
Metamorphosis, Fatty

Lung  
Pituitary gland  
Stomach

Inflammation, Chronic  
Adenoma, Nos  
Acanthosis  
Inflammation, Chronic Diffuse

Thyroid

Ulcer, Perforated  
Follicular-Cell Carcinoma

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_135

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Hemorrhage
Lung		Inflammation, Chronic
Mammary gland		Adenoma, Nos
		Cystic Ducts
		Fibroadenoma
		Galactocele
Tongue		Acanthosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Fibrosis
		Hydrometra

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_136

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Kidney

Liver

Lung

Pituitary gland

Spleen

Stomach

Unspecified

Tubule

Bile Duct

Abdominal Cavity

Pheochromocytoma

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Inflammation, Chronic

Metamorphosis, Fatty

Inflammation, Chronic

Adenoma, Nos

Hematopoiesis

Acanthosis

Hyperkeratosis

Ulcer, Perforated

Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_137

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone marrow  
Kidney

Liver

Lung  
Lymph node

Mammary gland  
Spleen

Tubule

Mediastinal Lymph Node  
Pancreatic Lymph Node

Hypoplasia, Nos  
Inflammation, Chronic  
Mineralization  
Pigmentation, Nos  
Granuloma, Nos  
Hepatocytomegaly  
Metamorphosis, Fatty  
Pigmentation, Nos  
Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Pigmentation, Nos  
Fibroadenoma  
Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_138

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Erythrophagocytosis
	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Acanthosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
Thyroid		Cyst, Follicular Nos
		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_140

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Bone marrow

Brain

Kidney

Cerebrum

Tubule

Liver

Lung

Pituitary gland

Stomach

Thyroid

Unspecified

Multiple Organs Nos

Hypoplasia, Nos

Carcinoma, Nos, Invasive

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Hepatitis, Toxic

Inflammation, Chronic

Carcinoma, Nos

Acanthosis

Hyperkeratosis

Cyst, Follicular Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_141

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos Medulla Cortex Nos	Hyperplasia, Focal Hyperplasia, Focal Metamorphosis, Fatty Pheochromocytoma
Bone	Skull	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Granuloma, Nos Metamorphosis, Fatty
Lung		Hemorrhage Inflammation, Chronic
Lymph node	Mandibular Lymph Node Mediastinal Lymph Node Mesenteric Lymph Node	Hyperplasia, Lymphoid Hyperplasia, Lymphoid Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma
Pancreas		Atrophy, Focal
Pituitary gland		Adenoma, Nos
Unspecified	Abdominal Cavity	Necrosis, Fat
Zymbal gland		Cystic Ducts

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_142

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Degeneration, Nos

Medulla

Hyperplasia, Focal

Cortex Nos

Metamorphosis, Fatty

Heart

Myocardium Nos

Inflammation, Chronic Focal

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Liver

Angiectasis

Lung

Granuloma, Nos

Mammary gland

Inflammation, Chronic

Cystic Ducts

Fibroadenoma

Thyroid

Hyperplasia, Nos

Unspecified

Multiple Organs Nos

Cyst, Follicular Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_143

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Mesenteric Lymph Node	Pigmentation, Nos
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma Galactocele Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Preputial gland		Cystic Ducts Hyperkeratosis
Unspecified	Multiple Organs Nos	Keratoacanthoma Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_144

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney

Tubule

Liver  
Lung  
Stomach

Cortical Adenoma  
Inflammation, Chronic  
Mineralization  
Pigmentation, Nos  
Hepatitis, Toxic  
Inflammation, Chronic  
Acanthosis  
Inflammation, Chronic Diffuse  
Necrosis, Focal  
Ulcer, Perforated  
Leukemia, Monocytic  
Hyperplasia, Papillary

Unspecified  
Urinary bladder

Multiple Organs Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_145

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Medulla

Hyperplasia, Focal

Cortex Nos

Metamorphosis, Fatty

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Liver

Hepatitis, Toxic

Lung

Inflammation, Chronic

Mammary gland

Fibroadenoma

Thyroid

Hyperplasia, C Cell

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_146

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Cecum, Colon	Inflammation, Chronic Focal
	Cecum, Colon	Necrosis, Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Inflammation, Chronic
		Leukocytosis, Nos
Lung		Inflammation, Chronic
	Pleura Nos	Inflammation, Chronic Focal
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Pituitary gland		Cyst, Nos
Uterus	Endometrium	Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_147

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Intestine Large

Submucosa, Colon

Fibrosis, Focal

Kidney

Colon

Parasitism

Lung

Inflammation, Chronic

Mammary gland

Mineralization

Inflammation, Chronic

Pituitary gland

Cystic Ducts

Fibroadenoma

Unspecified

Multiple Organs Nos

Adenoma, Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_148

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts Fibroadenoma Galactocele
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos Angiectasis
Tongue		Abscess, Nos Squamous Cell Papilloma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Hydrometra

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_149

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Esophagus		Hyperkeratosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
		Pigmentation, Nos
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
		Galactocele
Pituitary gland		Neurofibrosarcoma
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Ulcer, Perforated

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_150

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos Cortex Nos	Angiectasis Metamorphosis, Fatty Pheochromocytoma
Eye	Retina	Cataract Degeneration, Nos Synechia, Posterior
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Cecum, Colon	Inflammation, Chronic Focal
Intestine Small	Mesentery Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node Mesenteric Lymph Node Ileocolic Lymph Node Mediastinal Lymph Node	Erythrophagocytosis Hyperplasia, Reticulum Cell Lymphangiectasis Pigmentation, Nos
Mammary gland		Fibroadenoma
Spleen		Hematopoiesis Hemosiderosis
Thyroid		Follicular-Cell Carcinoma Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_151

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Bone marrow		Hypoplasia, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Hepatitis, Toxic
	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
Lung	Alveoli	Histiocytosis Inflammation, Chronic Inflammation, Interstitial
Mammary gland		Cystic Ducts
Pituitary gland		Hyperplasia, Diffuse Pigmentation, Nos
Spleen		Fibrosis, Diffuse
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_152

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Cortex Nos  
Myocardium Nos

Metamorphosis, Fatty  
Inflammation, Chronic Focal  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Granuloma, Nos  
Necrosis, Focal

Lung

Lymph node

Mandibular Lymph Node  
Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Lymphoid  
Hyperplasia, Reticulum Cell

Mammary gland

Cystic Ducts

Pituitary gland

Preputial gland

Spleen

Thyroid

Fibroadenoma

Hyperplasia, Focal

Squamous Cell Carcinoma

Hematopoiesis

Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_153

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Eye

Kidney

Retina

Tubule

Lung

Lymph node

Mammary gland

Ovary

Pancreas

Mediastinal Lymph Node

Acinus

Pheochromocytoma

Degeneration, Nos

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Inflammation, Chronic

Pigmentation, Nos

Fibroadenoma

Cyst, Follicular Nos

Hyperplasia, Focal

---

PRIMARY CAUSE OF DEATH

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_154

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Esophagus		Hyperkeratosis
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
		Papillary Cystadenoma, Nos
Oral mucosa		Squamous Cell Carcinoma
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
		Ulcer, Perforated
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Squamous Cell Carcinoma, Invasive

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_155

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Adenoma, Nos
		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Fibrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Endometrium	Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_157

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos Medulla Cortex Nos	Hyperplasia, Focal Hyperplasia, Focal Metamorphosis, Fatty
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule Bile Duct	Pigmentation, Nos Hyperplasia, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node Mediastinal Lymph Node	Erythrophagocytosis Pigmentation, Nos
Ovary		Cyst, Nos
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Angiectasis
Spleen		Hemorrhage
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_158

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Bone

Kidney

Sternum

Tubule

Lung

Preputial gland

Spleen

Unspecified

Uterus

Multiple Organs Nos

Pheochromocytoma

Osteopetrosis

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Inflammation, Chronic

Carcinoma, Nos

Necrosis, Focal

Leukemia, Monocytic

Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_159

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Heart

Myocardium Nos

Inflammation, Chronic Diffuse

Atrium

Thrombosis, Nos

Kidney

Inflammation, Chronic

Liver

Hemorrhage

Hepatitis, Toxic

Necrosis, Focal

Pigmentation, Nos

Lung

Inflammation, Chronic

Lymph node

Mandibular Lymph Node

Hyperplasia, Lymphoid

Mediastinal Lymph Node

Hyperplasia, Lymphoid

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Pituitary gland

Adenoma, Nos

Cyst, Hemorrhagic

Cyst, Nos

Spleen

Hematopoiesis

Stomach

Acanthosis

Zymbal gland

Cystic Ducts

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

---

**ANIMAL ID:** 2\_160

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Bone	Maxilla	Squamous Cell Carcinoma, Invasive Inflammation, Chronic Mineralization
Kidney		
Liver	Bile Duct	Pigmentation, Nos Hyperplasia, Nos Metamorphosis, Fatty Pigmentation, Nos Inflammation, Chronic
Lung	Cervical Lymph Node Nos Mandibular Lymph Node	Hyperplasia, Lymphoid
Lymph node		Hyperplasia, Lymphoid
Mammary gland	Turbinate Nos	Cystic Ducts
Nasal cavity		Squamous Cell Carcinoma, Invasive
Skin	Multiple Organs Nos	Squamous Cell Carcinoma
Thyroid		Hyperplasia, C Cell
Unspecified		Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_161

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Congestion, Nos
	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Pigmentation, Nos
Urinary bladder		Endometrial Stromal Sarcoma, Invasive
Uterus		Endometrial Stromal Sarcoma
	Cervix Uteri	Endometrial Stromal Sarcoma, Invasive

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_162

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Bone	Femur	Osteopetrosis
	Skull	Osteopetrosis
	Sternum	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
		Necrosis, Focal
Lung	Alveoli	Histiocytosis
		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenocarcinoma, Nos
		Adenoma, Nos
Pancreas		Atrophy, Focal
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Ulcer, Perforated
Thyroid		Follicular-Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_163

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Hepatitis, Toxic Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Adenocarcinoma, Nos Cystic Ducts Hyperplasia, Nos
Pituitary gland		Cyst, Nos
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_164

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Inflammation, Acute Focal Metamorphosis, Fatty
Lung		Inflammation, Chronic Pigmentation, Nos
Lymph node	Mandibular Lymph Node Mediastinal Lymph Node Mesenteric Lymph Node	Hyperplasia, Lymphoid Hyperplasia, Lymphoid Hyperplasia, Reticulum Cell
Spleen		Hematopoiesis
Stomach		Acanthosis Hyperkeratosis Inflammation, Chronic Diffuse Necrosis, Focal
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Sarcoma Hydrometra

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_165

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatocytomegaly
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_166

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Medulla

Cortical Adenoma

Kidney

Hyperplasia, Focal

Liver

Mineralization

Lung

Focal Cellular Change

Lymph node

Mesenteric Lymph Node

Inflammation, Chronic

Mammary gland

Hyperplasia, Reticulum Cell

Fibroadenoma

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C61223A

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: Asbestos, chrysotile(SR)

CAS Number: 12001-29-5

Date Report Requested: 10/26/2014

Time Report Requested: 17:51:05

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 2\_167

TRT#: 2

SEX: Female

DAY ON TEST:

DOSE: 10000 PPM

DISP: Moribund Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Eye	Retina	Degeneration, Nos
Harderian gland	Harderian Gland	Inflammation, Acute Diffuse
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
		Hyperplasia, Diffuse
Ovary		Cyst, Nos
Spleen		Hematopoiesis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Ulcer, Perforated
Thyroid		Angiectasis
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_168

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
Liver		Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
Ovary		Granulosa-Cell Carcinoma
Pancreas		Granulosa-Cell Carcinoma, Metastatic
	Acinus	Hyperplasia, Focal
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Angiectasis
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_169

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Metamorphosis, Fatty

Eye

Retina

Degeneration, Nos

Heart

Myocardium Nos

Inflammation, Chronic Focal

Kidney

Inflammation, Chronic

Mineralization

Tubule

Pigmentation, Nos

Liver

Metamorphosis, Fatty

Lung

Inflammation, Chronic

Mammary gland

Cystic Ducts

Fibroadenoma

Galactocele

Pituitary gland

Adenoma, Nos

Thyroid

Hyperplasia, C Cell

Uterus

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_170

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye		Phthisis Bulbi
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Erythrophagocytosis
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Pancreas		Atrophy, Focal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_171

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Small	Ileum	Parasitism
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic Pigmentation, Nos
Lung		Inflammation, Chronic
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_173

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
Preputial gland		Keratoacanthoma
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_174

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Hyperplasia, Nos
Lung		Inflammation, Chronic
Pituitary gland		Adenoma, Nos
Thyroid		Follicular-Cell Adenoma
Unspecified	Flank	Fibroma
	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_175

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Cecum, Colon	Inflammation, Acute Diffuse
	Cecum, Colon	Inflammation, Chronic Diffuse
	Colon	Inflammation, Chronic Focal
	Cecum, Colon	Necrosis, Focal
	Colon	Necrosis, Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Ovary		Hemorrhage
Spleen		Hemosiderosis
Stomach		Hyperkeratosis
		Necrosis, Focal

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_176

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Tubule

Mineralization

Lung

Mammary gland

Pituitary gland

Pigmentation, Nos

Inflammation, Chronic

Fibroadenoma

Cyst, Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_177

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Bone marrow		Myelopoiesis
Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Pituitary gland		Cyst, Nos
Preputial gland		Abscess, Nos
		Cystic Ducts
		Hyperkeratosis
		Hyperplasia, Focal
Spleen		Hematopoiesis
Stomach		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Abscess, Nos
	Cervix Uteri	Acanthosis
	Cervix Uteri	Hyperkeratosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_178

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pancreas		Atrophy, Diffuse
Pituitary gland		Adenoma, Nos
Spleen		Necrosis, Nos
Stomach		Hyperkeratosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Inflammation, Chronic Diffuse

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_179

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Angiectasis
		Focal Cellular Change
Lung		C-Cell Carcinoma, Metastatic
		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Diffuse
Pituitary gland		Adenoma, Nos
		Angiectasis
Skin	Nose	Keratoacanthoma
Spleen		Hemosiderosis
Stomach		Inflammation, Chronic Focal
		Necrosis, Focal
Thyroid		C-Cell Carcinoma
Unspecified	Chest	Fibroma
	Multiple Organs Nos	Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_180

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Cortex Nos  
Myocardium Nos

Necrosis, Focal  
Inflammation, Chronic Focal  
Inflammation, Chronic

Liver

Tubule  
Bile Duct  
Bile Duct

Pigmentation, Nos  
Hyperplasia, Nos  
Inflammation, Chronic  
Metamorphosis, Fatty

Lung  
Lymph node  
Mammary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Fibroadenoma  
Galactocele  
Hyperplasia, Nos

Pituitary gland

Adenoma, Nos  
Angiectasis

Spleen  
Stomach

Hemosiderosis  
Hyperkeratosis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_181

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Carcinoma, Metastatic
		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Erythrophagocytosis
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Acanthosis Hyperkeratosis
		Inflammation, Chronic Diffuse
Thyroid		Necrosis, Focal Carcinoma, Invasive
		Hyperplasia, C Cell
Zymbal gland		Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_182

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
		Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Skin	Eyelid Nos	Acanthosis
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_183

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Kidney

Cortex Nos

Metamorphosis, Fatty

Liver

Tubule

Inflammation, Chronic

Lung

Mineralization

Lymph node

Pigmentation, Nos

Mammary gland

Mesenteric Lymph Node

Hepatitis, Toxic

Unspecified

Multiple Organs Nos

Inflammation, Chronic

Hyperplasia, Reticulum Cell

Cystic Ducts

Fibroadenoma

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_184

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
Lung		Inflammation, Chronic
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_185

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Granuloma, Nos Inflammation, Chronic Necrosis, Focal
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts Fibroadenoma
Pituitary gland		Adenoma, Nos Angiectasis
Spleen		Hematopoiesis Hemosiderosis
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_186

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty Necrosis, Focal
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts Fibroadenoma
Pituitary gland		Adenoma, Nos Angiectasis
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_187

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla Cortex Nos	Hyperplasia, Focal Metamorphosis, Fatty Pheochromocytoma
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Ovary		Granulosa-Cell Tumor
Spleen		Hemosiderosis
Stomach		Acanthosis Hyperkeratosis
		Inflammation, Chronic Diffuse
Thyroid		Cyst, Follicular Nos
Tongue		Acanthosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_188

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty Pheochromocytoma
Bone	Skull	Osteopetrosis
Bone marrow		Hypoplasia, Nos
Eye	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Fibroadenoma
Pancreas	Islets	Islet-Cell Carcinoma
Skin	Tail	Squamous Cell Papilloma
Stomach		Acanthosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Necrosis, Focal

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_189

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal Pheochromocytoma
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp
	Endometrium	Hyperplasia, Papillary
Zymbal gland		Cystic Ducts

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_190

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hemorrhage
	Mandibular Lymph Node	Hyperplasia, Lymphoid
Pituitary gland		Cyst, Nos
Preputial gland		Cystic Ducts
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_191

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Esophagus		Hyperkeratosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Metamorphosis, Fatty
		Necrosis, Focal
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
		Hyperplasia, Lymphoid
Mammary gland		Adenocarcinoma, Nos
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Preputial gland		Squamous Cell Carcinoma
Spleen		Hematopoiesis
Thyroid		Follicular-Cell Adenoma
		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_192

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Granuloma, Nos

Bile Duct

Inflammation, Chronic

Lung

Pigmentation, Nos

Pituitary gland

Inflammation, Chronic

Spleen

Adenoma, Nos

Hemosiderosis

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_193

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Esophagus		Hyperkeratosis
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thyroid		C-Cell Carcinoma

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_194

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Kidney

Cortex Nos

Hyperplasia, Focal  
Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Hemorrhage  
Hepatitis, Toxic  
Necrosis, Focal

Lung  
Mammary gland  
Pancreas  
Pituitary gland

Inflammation, Chronic  
Cystic Ducts  
Atrophy, Focal  
Ganglioneuroma

Unspecified  
Uterus

Multiple Organs Nos

Hemorrhage  
Leukemia, Monocytic  
Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_195

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Cecum, Colon	Inflammation, Chronic Focal
Intestine Small	Jejunum	Leiomyoma
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Focal Cellular Change
		Necrosis, Focal
Lung		Pigmentation, Nos
Lymph node	Mesenteric Lymph Node	Inflammation, Chronic
Mammary gland		Hyperplasia, Lymphoid
		Cystic Ducts
		Fibroadenoma
Pituitary gland		Cyst, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Unspecified	Lower Leg Nos	Osteosarcoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_196

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Mammary gland		Adenocarcinoma, Nos Cystic Ducts Fibroadenoma Hyperplasia, Nos
Ovary		Cyst, Nos
Pituitary gland		Cyst, Nos
Stomach		Acanthosis Necrosis, Focal
Thyroid		Cystic Follicles Follicular-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_197

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Intestine Large  
Kidney

Colon

Parasitism  
Inflammation, Chronic  
Mineralization

Tubule

Necrosis, Diffuse

Tubule

Pigmentation, Nos

Liver

Focal Cellular Change

Pigmentation, Nos

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Pancreatic Lymph Node

Hyperplasia, Reticulum Cell

Spleen

Necrosis, Focal

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_198

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Bone marrow		Hypoplasia, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Angiectasis
Stomach		Inflammation, Acute Focal
		Inflammation, Chronic Diffuse
		Necrosis, Diffuse
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_199

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Acanthosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_200

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Degeneration, Nos
Kidney		Inflammation, Chronic
Lung	Alveoli	Histiocytosis
		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Parathyroid gland		Adenoma, Nos
Pituitary gland		Adenoma, Nos
Spleen	Follicles	Atrophy, Nos
		Hemosiderosis
Stomach		Hyperkeratosis
Unspecified	Multiple Organs Nos	Mineralization

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_201

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Liver

Focal Cellular Change

Lung

Hyperplasia, Alveolar Epithelium

Lymph node

Mediastinal Lymph Node

Inflammation, Chronic

Hemorrhage

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mediastinal Lymph Node

Pigmentation, Nos

Spleen

Hemosiderosis

Uterus

Endometrial Stromal Sarcoma

Hydrometra

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_202

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Brain		Hemorrhage
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Pituitary gland		Adenoma, Nos
Spleen		Necrosis, Focal
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_203

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos Metamorphosis, Fatty Pigmentation, Nos
Liver		Inflammation, Chronic
Lung		Hyperplasia, Reticulum Cell
Lymph node	Mesenteric Lymph Node	Adenoma, Nos
Mammary gland		Cystic Ducts Adenoma, Nos
Pituitary gland		Hemosiderosis
Spleen		Acanthosis
Stomach		Hyperkeratosis Inflammation, Chronic Diffuse
		Ulcer, Perforated
Thyroid		C-Cell Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_204

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Liver

Tubule

Pigmentation, Nos  
Focal Cellular Change  
Granuloma, Nos  
Metamorphosis, Fatty  
Pigmentation, Nos

Lung

Lymph node

Mammary gland

Pituitary gland

Mesenteric Lymph Node

Inflammation, Chronic  
Hyperplasia, Reticulum Cell  
Fibroadenoma  
Adenoma, Nos  
Angiectasis

Stomach

Pigmentation, Nos

Thyroid

Acanthosis  
Necrosis, Focal  
C-Cell Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_205

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Heart

Cortex Nos

Metamorphosis, Fatty

Kidney

Myocardium Nos

Inflammation, Chronic Diffuse

Inflammation, Chronic

Mineralization

Lung

Tubule

Pigmentation, Nos

Mammary gland

Inflammation, Chronic

Adenoma, Nos

Cystic Ducts

Fibroadenoma

Galactocele

Thyroid

Follicular-Cell Carcinoma

Hyperplasia, C Cell

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_206

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Brain	Cerebellum Nos	Carcinoma, Nos, Invasive
Esophagus		Hyperkeratosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Focal Cellular Change
		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Ovary		Cyst, Nos
Pituitary gland		Carcinoma, Nos
Unspecified	Diaphragm Nos	Hernia, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_207

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Bone	Skull	Osteopetrosis
	Sternum	Osteopetrosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Intestine Large	Descending, Colon	Adenomatous Polyp, Nos
	Descending, Colon	Parasitism
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Adenoma, Nos
		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Pituitary gland		Angiectasis
Stomach		Hemorrhage
Thyroid		Cyst, Follicular Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_208

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
		Galactocele
Pituitary gland		Adenoma, Nos
Stomach		Hyperkeratosis
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_209

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Angiectasis
	Cortex Nos	Metamorphosis, Fatty
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Adenocarcinoma, Nos, Metastatic
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Pancreatic Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Necrosis, Focal
Thymus		Adenocarcinoma, Nos
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Hydrometra

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_210

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Granuloma, Nos
Lung		Granuloma, Nos
		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Papillary Adenocarcinoma
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Focal
		Necrosis, Focal
Unspecified	Leg	Fibrosarcoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_211

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
Liver		Focal Cellular Change Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
Skin	Nose	Squamous Cell Papilloma
Spleen		Hematopoiesis Hemosiderosis

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_212

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Brain	Meninges	Inflammation, Acute Diffuse
Eye	Retina	Degeneration, Nos Empyema
Kidney	Cornea	Inflammation, Acute Focal Inflammation, Chronic Mineralization
Liver	Tubule	Pigmentation, Nos Focal Cellular Change Hemorrhage
Lung		Hemorrhage Inflammation, Acute Focal Inflammation, Chronic
Mammary gland		Cystic Ducts
Pharynx	Pharyngeal Mucosa	Hyperkeratosis
Spleen		Hematopoiesis Hemosiderosis
Thyroid		C-Cell Carcinoma
Unspecified	Diaphragm Nos	Hernia, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_213

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Bone  
Kidney

Cortex Nos  
Sternum

Metamorphosis, Fatty  
Osteopetrosis  
Inflammation, Chronic  
Mineralization

Tubule

Liver  
Lung  
Mammary gland  
Stomach

Pigmentation, Nos  
Metamorphosis, Fatty  
Inflammation, Chronic  
Cystic Ducts  
Acanthosis  
Hyperkeratosis  
Necrosis, Focal  
Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_214

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos

Liver

Metamorphosis, Fatty

Lung

Inflammation, Chronic

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Pituitary gland

Adenoma, Nos

Stomach

Acanthosis

Hyperkeratosis

Inflammation, Chronic Diffuse

Thyroid

Necrosis, Focal

Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_215

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Bone	Skull	Fibrous Osteodystrophy
	Skull	Osteopetrosis
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Small	Mesentery Nos	Periarteritis
Kidney		Inflammation, Chronic
Liver	Bile Duct	Hyperplasia, Nos
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
		Inflammation, Interstitial
Lymph node	Mesenteric Lymph Node	Erythrophagocytosis
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
		Hyperplasia, Nos
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Stomach	Muscularis	Degeneration, Nos
	Fundus	Hyperplasia, Epithelial
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Mineralization

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_216

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos Cortex Nos	Hyperplasia, Focal Metamorphosis, Fatty Pheochromocytoma
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Necrosis, Focal Neoplastic Nodule
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts Fibroadenoma
Spleen	Capsule	Fibrosis, Multifocal
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_217

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Hematopoiesis Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mediastinal Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
Pancreas		Ectopia
Preputial gland		Abscess, Nos
		Squamous Cell Carcinoma
Skin	Nose	Squamous Cell Papilloma
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_218

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Bone	Sternum	Osteopetrosis
Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
		Mitotic Alteration
Lung		Inflammation, Acute Focal
		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Ovary		Cyst, Nos
Skin	Flank	Abscess, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Carcinoma
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_219

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Cortical Adenoma
	Cortex Nos	Metamorphosis, Fatty
Bone	Sternum	Osteopetrosis
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
		Galactocele
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Unspecified	Head	Abscess, Nos
	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_220

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver	Bile Duct	Dilatation, Nos
	Bile Duct	Fibrosis, Focal
	Bile Duct	Hyperplasia, Focal
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Stomach		Acanthosis Hyperkeratosis Inflammation, Chronic Diffuse Ulcer, Perforated

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_221

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic Mineralization
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts Fibroadenoma
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_222

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Bone	Skull	Osteopetrosis
	Sternum	Osteopetrosis
Brain	Cerebrum	Carcinoma, Nos, Invasive
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Fibroadenoma
		Galactocele
Pituitary gland		Carcinoma, Nos
Spleen		Hemosiderosis

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_223

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal Pheochromocytoma
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic Infarct, Nos
Lung		Inflammation, Chronic
Lymph node	Pancreatic Lymph Node	Pigmentation, Nos
Pituitary gland		Adenoma, Nos
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Cervix Uteri	Acanthosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_224

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Natural Death

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Esophagus		Hyperkeratosis
Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Congestion, Nos
		Inflammation, Chronic
		Pigmentation, Nos
Pituitary gland		Adenoma, Nos
		Angiectasis
Spleen		Hematopoiesis
		Hemosiderosis
Stomach		Acanthosis
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_703

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney

Lung

Lymph node

Mesenteric Lymph Node

Mineralization

Congestion, Nos

Inflammation, Chronic

Hyperplasia, Reticulum Cell

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_975

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
Liver		Metamorphosis, Fatty
		Necrosis, Focal
Lung		Congestion, Nos
		Inflammation, Chronic
Spleen		Hematopoiesis
		Hemorrhage
Uterus		Endometrial Stromal Sarcoma
	Cervix Uteri	Endometrial Stromal Sarcoma, Invasive

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_976

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node		Hyperplasia, Lymphoid Inflammation, Acute Fibrinous Lymphangiectasis
Mammary gland		Cystic Ducts Fibroadenoma
Pancreas		Ectopia
Pituitary gland		Cyst, Nos
Preputial gland		Squamous Cell Carcinoma
Spleen		Hematopoiesis
Unspecified		Neurofibroma
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_977

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Terminal Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Descending, Colon	Leiomyosarcoma
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Hyperplasia, Alveolar Epithelium
		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Adenoma, Nos
		Cystic Ducts
		Fibroadenoma
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thyroid		Follicular-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_978

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla  
Cortex Nos

Cortical Adenoma  
Hyperplasia, Focal  
Metamorphosis, Fatty  
Cataract

Eye

Retina

Degeneration, Nos

Heart

Myocardium Nos

Inflammation, Chronic Diffuse

Kidney

Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Focal Cellular Change

Liver

Lung

Mammary gland

Inflammation, Chronic

Cystic Ducts

Hyperplasia, Nos

Skin

Flank

Fibrosarcoma

Spleen

Hematopoiesis

Hemosiderosis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_979

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
		Angiectasis
Skin	Chest	Basal-Cell Tumor
Spleen		Hemosiderosis
Thymus		Adenocarcinoma, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_980

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Eye		Cataract
	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Intestine Large	Colon	Parasitism
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Atrophy, Nos
	Mesenteric Lymph Node	Lymphangiectasis
	Mesenteric Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_981

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
	Bile Duct	Inflammation, Chronic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
Pancreas	Acinus	Hyperplasia, Focal
Pituitary gland		Cyst, Nos
Preputial gland		Carcinoma, Nos
Spleen		Hematopoiesis
Thyroid		C-Cell Adenoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_982

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Focal
	Medulla	Hyperplasia, Focal
Eye		Cataract
	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Hepatitis, Toxic
		Necrosis, Focal
		Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Adenocarcinoma, Nos
		Cystic Ducts
		Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
Spleen		Fibrosis, Diffuse
Stomach		Acanthosis
		Hyperkeratosis
		Necrosis, Focal
Thyroid		Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_983

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Brain	Cerebrum	Carcinoma, Nos, Invasive
Eye		Cataract
	Retina	Degeneration, Nos
Intestine Large	Cecum, Colon	Granuloma, Nos
	Cecum, Colon	Hematopoiesis
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Pigmentation, Nos
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Lymphoid
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Lymphangiectasis
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Cystic Ducts
		Papillary Cystadenoma, Nos
Pituitary gland		Carcinoma, Nos
Skin	Cheek	Abscess, Nos
Spleen		Hemosiderosis
Uterus	Endometrium	Cyst, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_984

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Bone	Femur	Osteosarcoma
Eye	Retina	Cataract
		Degeneration, Nos
Heart	Myocardium Nos	Synechia, Posterior
Kidney		Inflammation, Chronic Diffuse
		Inflammation, Chronic
		Mineralization
Liver	Tubule	Pigmentation, Nos
		Focal Cellular Change
		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Erythrophagocytosis
Mammary gland		Cystic Ducts
		Fibroadenoma
		Hyperplasia, Nos
Spleen		Hematopoiesis
		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
		Inflammation, Chronic Diffuse
		Ulcer, Perforated
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_985

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
Bone marrow		Hypoplasia, Nos
Eye		Cataract
	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
		Necrosis, Focal
		Pigmentation, Nos
Lung		Inflammation, Chronic
Mammary gland		Cystic Ducts
		Galactocele
Ovary		Cyst, Nos
Pituitary gland		Angiectasis
		Hyperplasia, Focal
Spleen		Hematopoiesis
		Hemosiderosis
Stomach		Necrosis, Focal
Thyroid		C-Cell Adenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_986

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Focal
	Cortex Nos	Metamorphosis, Fatty
Eye	Retina	Degeneration, Nos
Heart	Myocardium Nos	Inflammation, Chronic Diffuse
Kidney		Inflammation, Chronic
		Mineralization
Liver		Granuloma, Nos
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Mammary gland		Cystic Ducts
		Fibroadenoma
Pituitary gland		Adenoma, Nos
Skin		Ulcer, Nos
Spleen		Hematopoiesis
Stomach		Inflammation, Chronic Diffuse
		Ulcer, Perforated

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_987

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Inflammation, Chronic  
Mineralization

Tubule

Pigmentation, Nos  
Focal Cellular Change

Liver

Inflammation, Chronic

Lung

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Pituitary gland

Angiectasis

Unspecified

Multiple Organs Nos

Cyst, Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_989

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Metamorphosis, Fatty
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Pituitary gland		Adenoma, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

---

**ANIMAL ID:** 2\_990

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Eye		Cataract
	Retina	Degeneration, Nos
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Papillary Cystadenoma, Nos
Pancreas		Atrophy, Diffuse
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_991

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Pheochromocytoma

Eye

Retina

Degeneration, Nos

Kidney

Tubule

Mineralization

Pigmentation, Nos

Lymph node

Mesenteric Lymph Node

Hyperplasia, Reticulum Cell

Mammary gland

Cystic Ducts

Unspecified

Multiple Organs Nos

Fibroadenoma

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_992

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Liver		Hepatitis, Toxic Necrosis, Focal Neoplastic Nodule
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_993

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Focal
Kidney		Inflammation, Chronic Mineralization
	Tubule	Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Fibroadenoma
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_994

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Eye

Heart

Kidney

Retina

Myocardium Nos

Tubule

Pheochromocytoma

Degeneration, Nos

Inflammation, Chronic Focal

Inflammation, Chronic

Mineralization

Pigmentation, Nos

Metamorphosis, Fatty

Inflammation, Chronic

Adenoma, Nos

Acanthosis

Hyperkeratosis

Inflammation, Chronic Diffuse

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_995

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney	Inflammation, Chronic
Liver	Hepatitis, Toxic
Lung	Inflammation, Chronic
Mammary gland	Cystic Ducts
	Fibroadenoma
Pituitary gland	Adenoma, Nos
Thyroid	C-Cell Carcinoma
Unspecified	Multiple Organs Nos
	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

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**ANIMAL ID:** 2\_996

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney

Lung

Lymph node

Mammary gland

Spleen

Stomach

Unspecified

Mandibular Lymph Node

Mediastinal Lymph Node

Diaphragm Nos

Mineralization

Inflammation, Chronic

Inflammation, Fibrinous

Inflammation, Fibrinous

Adenocarcinoma, Nos

Hematopoiesis

Hyperkeratosis

Hernia, Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A  
**Test Type:** Long-Term  
**Route:** Dosed-Feed  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Asbestos, chrysotile(SR)  
**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 17:51:05  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_997

**TRT#:** 2  
**DOSE:** 10000 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Metamorphosis, Fatty
Bone	Sternum	Degeneration, Nos
Bone marrow		Hypoplasia, Nos
Eye	Retina	Degeneration, Nos
Intestine Small	Duodenum	Leiomyosarcoma
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Metamorphosis, Fatty
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
Pituitary gland		Adenoma, Nos
Spleen		Hematopoiesis
		Hemosiderosis
Stomach		Acanthosis
		Hyperkeratosis
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH** -

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_998

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney		Inflammation, Chronic
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Granuloma, Nos
Lung		Inflammation, Chronic
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Reticulum Cell
	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
	Mediastinal Lymph Node	Pigmentation, Nos
Mammary gland		Fibroadenoma
		Hyperplasia, Nos
Pituitary gland		Carcinoma, Nos
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell
Unspecified	Diaphragm Nos	Hernia, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C61223A

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** Asbestos, chrysotile(SR)

**CAS Number:** 12001-29-5

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 17:51:05

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

**Lab:** NA

**ANIMAL ID:** 2\_999

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 10000 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone	Sternum	Osteopetrosis
Kidney		Inflammation, Chronic
		Mineralization
	Tubule	Pigmentation, Nos
Liver		Focal Cellular Change
		Pigmentation, Nos
Lung		Inflammation, Chronic
Lymph node	Mesenteric Lymph Node	Hyperplasia, Reticulum Cell
Mammary gland		Cystic Ducts
		Fibroadenoma
		Galactocele
Spleen		Hematopoiesis

PRIMARY CAUSE OF DEATH

-

**\*\* END OF REPORT \*\***