

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**C Number:** C50533

**Cage Range:** All

**Date Range:** All

**Reasons For Removal:** All

**Removal Date Range:** All

**Treatment Groups:** All

**Study Gender:** Female

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_001

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Congestion, Nos

Cortical Adenoma

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Bile Duct

Hyperplasia, Nos

Necrosis, Nos

Neoplastic Nodule

Lung

Bronchopneumonia, Acute

Mammary gland

Fibroadenoma

Pancreas

Islets

Islet-Cell Adenoma

Spleen

Depletion, Lymphoid

Unspecified

Multiple Organs Nos

Hemosiderosis

Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_002

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Larynx

Hemorrhage

Lung

Edema, Nos

Unspecified

Multiple Organs Nos

Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_003

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Mineralization

Liver

Nephropathy

Lymph node

Mandibular Lymph Node

Cytoplasmic Change, Basophilic

Mammary gland

Plasmacytosis

Pituitary gland

Fibroadenoma

Uterus

Chromophobe Adenoma

Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_004

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Cytoplasmic Change, Nos Pheochromocytoma
Heart		Fibrosis
Kidney		Nephropathy
Liver		Abnormal Curvature
		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
		Hyperplasia, Alveolar Epithelium
Lymph node	Mandibular Lymph Node	Hemorrhage
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
Pituitary gland		Cyst, Nos
Stomach		Hyperplasia, Epithelial
Thyroid		C-Cell Adenoma
		Hyperplasia, C Cell
Trachea		Inflammation, Acute

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_005

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic Hematopoiesis
Lung		Histiocytosis
Pancreas	Acinus	Atrophy, Nos
Thymus		Hemorrhage
Unspecified	Multiple Organs Nos	Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_006

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Lung

Congestion, Nos

Edema, Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_007

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
Lung		Bronchopneumonia, Acute
Pituitary gland		Cyst, Nos
Salivary gland		Fibrosis
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Congestion, Nos
Uterus		Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_008

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney  
Liver

Congestion, Nos  
Fibrosis  
Nephropathy  
Cytoplasmic Change, Basophilic  
Cytoplasmic Change, Eosinophilic  
Granuloma, Nos  
Necrosis, Nos

Lung  
Lymph node  
Mammary gland  
Pituitary gland  
Salivary gland  
Spleen

Mandibular Lymph Node

Bronchopneumonia, Acute  
Plasmacytosis  
Fibroadenoma  
Chromophobe Adenoma  
Atrophy, Nos  
Hematopoiesis  
Hemosiderosis

Unspecified

Mediastinum Nos  
Multiple Organs Nos

Fibroma  
Inflammation, Acute  
Thrombosis, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_009

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Eye

Kidney

Liver

Lung

Lymph node

Mammary gland

Unspecified

Mandibular Lymph Node

Multiple Organs Nos

Pigmentation, Nos

Retinopathy

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Pigmentation, Nos

Plasmacytosis

Dilatation, Ducts

Hematopoiesis

Rhabdomyosarcoma

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_010

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Pancreas

Hematopoiesis

Spleen

Accessory Structure

Hemosiderosis

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_011

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
Lymph node	Mediastinal Lymph Node	Plasmacytosis
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Congestion, Nos
Uterus		Endometrial Stromal Polyp
Vagina		Adenomatous Polyp, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_012

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Eye		Retinopathy
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
Lymph node	Mandibular Lymph Node	Atrophy, Nos
Mammary gland		Lactation
Ovary		Cyst, Nos
Pituitary gland		Chromophobe Adenoma
Unspecified	Multiple Organs Nos	Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_013

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Thrombosis, Nos

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Necrosis, Nos

Lung

Leukemia, Monocytic

Mammary gland

Fibroadenoma

Spleen

Fibrosis

Stomach

Hyperplasia, Epithelial

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_014

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Edema, Nos
		Inflammation, Acute
Mammary gland		Fibroadenoma
		Lactation
Pancreas		Lymphocytic Inflammatory Infiltrate
Pituitary gland		Cyst, Nos
		Hyperplasia, Chromophobe Cell
Salivary gland		Atrophy, Nos
Spleen		Granuloma, Nos
Unspecified	Multiple Organs Nos	Congestion, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_015

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Kidney

Liver

Lung

Mammary gland

Pituitary gland

Spleen

Thyroid

Unspecified

Thyroglossal Duct

Multiple Organs Nos

Pheochromocytoma

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Bronchopneumonia, Acute

Hyperplasia, Alveolar Epithelium

Dilatation, Ducts

Lactation

Chromophobe Adenoma

Cyst, Nos

Hematopoiesis

Cyst, Ultimobranchial

Congestion, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_016

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Lung		Bronchopneumonia, Acute
Pancreas	Acinus	Cytoplasmic Vacuolization
Pituitary gland		Cyst, Nos
Skin		Cyst, Epidermal Inclusion
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Congestion, Nos
	Multiple Organs Nos	Inflammation, Acute

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_017

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart		Fibrosis
Intestine Large	Colon	Parasitism
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
Pituitary gland		Cyst, Nos
Unspecified	Multiple Organs Nos	Congestion, Nos
	Mediastinum Nos	Inflammation, Acute

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_018

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Accidentally Killed

**HISTO:**

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**OBSERVATIONS**

Liver

Cytoplasmic Change, Basophilic

Lung

Edema, Nos

Pituitary gland

Cyst, Nos

Unspecified

Multiple Organs Nos

Hyperplasia, Chromophobe Cell

Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_019

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Cytoplasmic Vacuolization
Bone marrow		Fibrosis, Myelo
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Leukemia, Monocytic
Lung		Bronchopneumonia, Acute
Lymph node	Mediastinal Lymph Node	Inflammation, Acute
Pituitary gland		Chromophobe Adenoma
		Cyst, Nos
Unspecified	Chest	Fibroadenoma
	Multiple Organs Nos	Hematopoiesis
	Multiple Organs Nos	Osteosarcoma, Uncertain Primary/Metastatic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_020

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Lung

Bronchopneumonia, Acute

Lymph node

Mediastinal Lymph Node

Inflammation, Acute

Mammary gland

Lactation

Thymus

Cyst, Nos

Unspecified

Multiple Organs Nos

Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_021

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Lung

Inflammation, Acute

Pancreas

Hemorrhage

Unspecified

Multiple Organs Nos

Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_022

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Cortex Nos

Cortical Adenoma

Cytoplasmic Vacuolization

Degeneration, Cystic

Pheochromocytoma

Bone marrow

Fibrosis, Myelo

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Neoplastic Nodule

Lung

Mineralization

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Dilatation, Ducts

Galactocele

Unspecified

Fibrosarcoma

Uterus

Multiple Organs Nos

Hematopoiesis

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_023

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Liver

Lung

Lymph node

Mammary gland

Spleen

Mediastinal Lymph Node

Congestion, Nos

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Fibrosis

Hyperplasia, Alveolar Epithelium

Inflammation, Acute

Hemorrhage

Lactation

Hemosiderosis

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_024

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lung

Lymph node

Mammary gland

Pituitary gland

Salivary gland

Unspecified

Mandibular Lymph Node

Cortical Adenoma

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Granuloma, Nos

Histiocytosis

Plasmacytosis

Fibroadenoma

Chromophobe Adenoma

Atrophy, Nos

Fibroma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_025

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lung

Lymph node

Pituitary gland

Unspecified

Mediastinal Lymph Node

Multiple Organs Nos

Degeneration, Cystic

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Granuloma, Nos

Bronchopneumonia, Acute

Histiocytosis

Hemorrhage

Cyst, Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_026

**TRT#:** 1  
**DOSE:** 120.0 MG/KG

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

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos Medulla	Cortical Adenoma Cytoplasmic Vacuolization Hyperplasia, Nos Fibrosis Nephropathy
Heart		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic
Kidney		Bronchopneumonia, Acute
Liver		Histiocytosis
Lung		Plasmacytosis Fibroadenoma Chromophobe Adenoma
Lymph node	Mandibular Lymph Node	Hematopoiesis
Mammary gland		Cyst, Nos
Pituitary gland		
Unspecified	Multiple Organs Nos	
Uterus	Endometrium	

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_027

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Degeneration, Cystic

Fibrosis

Nephropathy

Abnormal Curvature

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Bronchopneumonia, Acute

Lung

Lymph node

Mediastinal Lymph Node

Hemorrhage

Unspecified

Multiple Organs Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_028

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Hyperplasia, Nodular

Fibrosis

Nephropathy

Abnormal Curvature

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Fibrosis

Neoplastic Nodule

Lung

Lymph node

Mammary gland

Unspecified

Mandibular Lymph Node

Histiocytosis

Plasmacytosis

Lactation

Vagina

Multiple Organs Nos

Multiple Organs Nos

Congestion, Nos

Hematopoiesis

Inflammation, Acute Necrotizing

Squamous Cell Papilloma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_029

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Congestion, Nos

Bone marrow

Cytoplasmic Vacuolization

Heart

Fibrosis, Myelo

Kidney

Fibrosis

Liver

Nephropathy

Lung

Cytoplasmic Change, Basophilic

Bronchopneumonia, Acute

Mammary gland

Granuloma, Nos

Pituitary gland

Lactation

Unspecified

Multiple Organs Nos

Cyst, Nos

Uterus

Hematopoiesis

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_030

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
		Fibrosis
Pituitary gland		Cyst, Nos
Salivary gland		Atrophy, Nos
Skin		Acanthosis
Unspecified	Multiple Organs Nos	Congestion, Nos
Uterus	Endometrium	Cyst, Nos
		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

Experiment Number: C50533

Test Type: Long-Term

Route: Gavage

Species/Strain: Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Test Compound: 2,4- & 2,6-Toluene diisocyanate

CAS Number: 26471-62-5

Date Report Requested: 10/26/2014

Time Report Requested: 14:00:15

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1\_031

TRT#: 1

SEX: Female

DAY ON TEST:

DOSE: 120.0 MG/KG

DISP: Scheduled Sacrifice

HISTO:

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Brain		Mineralization
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Vacuolization
Lung		Bronchopneumonia, Acute
		Hyperplasia, Alveolar Epithelium
		Inflammation, Interstitial
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
		Papillary Adenoma
Pancreas		Acinar-Cell Adenoma
	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Stomach	Fundal Gland	Dilatation, Nos
		Edema, Nos
Thyroid		C-Cell Adenoma
Unspecified	Back	Leiomyosarcoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_032

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart

Liver

Unspecified

Multiple Organs Nos

Fibrosis

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_033

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney  
Liver

Cortex Nos

Cytoplasmic Change, Nos  
Nephropathy  
Cytoplasmic Change, Basophilic  
Hyperplasia, Nos

Lung  
Lymph node  
Mammary gland  
Pituitary gland  
Spleen

Bile Duct

Bronchopneumonia, Acute  
Plasmacytosis  
Fibroadenoma  
Angiectasis  
Depletion, Lymphoid  
Hemosiderosis  
Congestion, Nos  
Hematopoiesis

Unspecified

Multiple Organs Nos  
Multiple Organs Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_034

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Congestion, Nos

Bone

Sternum

Hyperplasia, Nodular

Heart

Osteosclerosis

Intestine Large

Colon

Fibrosis

Kidney

Parasitism

Liver

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Inflammation, Acute Necrotizing

Lung

Bronchopneumonia, Acute

Histiocytosis

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Cystadenoma, Nos

Spleen

Hemosiderosis

Unspecified

Groin

Fibrosarcoma

Multiple Organs Nos

Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_035

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Hyperplasia, Nodular

Heart

Fibrosis

Kidney

Inflammation, Acute

Liver

Nephropathy

Mammary gland

Cytoplasmic Change, Basophilic

Spleen

Cytoplasmic Change, Eosinophilic

Unspecified

Multiple Organs Nos

Fibroadenoma

Hemosiderosis

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_036

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart

Kidney

Lung

Stomach

Unspecified

Multiple Organs Nos

Hemorrhage

Mineralization

Edema, Nos

Inflammation, Acute

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_037

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney  
Liver

Cortex Nos

Hyperplasia, Nodular  
Fibrosis  
Nephropathy  
Cytoplasmic Change, Basophilic  
Cytoplasmic Change, Eosinophilic  
Neoplastic Nodule

Lung  
Lymph node  
Mammary gland  
Pituitary gland  
Unspecified

Mandibular Lymph Node

Alveolar/Bronchiolar Carcinoma  
Plasmacytosis  
Lactation  
Chromophobe Adenoma  
Congestion, Nos

Multiple Organs Nos

---

PRIMARY CAUSE OF DEATH

-

---

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_038

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney  
Liver

Bile Duct

Lung

Lymph node  
Mammary gland

Mandibular Lymph Node

Ovary  
Pituitary gland  
Thymus

Unspecified  
Uterus

Multiple Organs Nos  
Endometrium

Angiectasis  
Nephropathy  
Cytoplasmic Change, Basophilic  
Cytoplasmic Change, Eosinophilic  
Hyperplasia, Nos  
Neoplastic Nodule  
Bronchopneumonia, Acute  
Foreign Body, Vegetable  
Plasmacytosis  
Fibroadenoma  
Cyst, Nos  
Chromophobe Adenoma  
Cyst, Nos  
Hematopoiesis  
Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_039

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung

Edema, Nos

Foreign Material, Nos

Lymphocytic Inflammatory Infiltrate

Unspecified

Multiple Organs Nos

Congestion, Nos

Uterus

Inflammation, Acute

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_040

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Neoplastic Nodule
Lung		Bronchopneumonia, Acute
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Hyperplasia, Nos
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Congestion, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_041

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Brain		Edema, Nos
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
Lung		Bronchopneumonia, Acute
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mediastinal Lymph Node	Plasmacytosis
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Congestion, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_042

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Cytoplasmic Vacuolization

Bone marrow

Cortex Nos

Hyperplasia, Nodular

Kidney

Fibrosis, Myelo

Liver

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Neoplastic Nodule

Thrombosis, Nos

Mammary gland

Fibroadenoma

Pituitary gland

Cyst, Nos

Thyroid

Hyperplasia, C Cell

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Uterus

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_043

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Vacuolization
Lung		Bronchopneumonia, Acute
Lymph node	Mediastinal Lymph Node	Inflammation, Acute
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Congestion, Nos
	Groin	Fibroadenoma

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_044

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lung

Mammary gland

Ovary

Pituitary gland

Salivary gland

Unspecified

Multiple Organs Nos

Cortical Adenoma

Fibrosis

Nephropathy

Leukemoid Reaction

Edema, Nos

Hemorrhage

Inflammation, Acute

Fibroadenoma

Lactation

Cyst, Nos

Chromophobe Adenoma

Atrophy, Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_045

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Bone	Cartilage,Nos	Necrosis, Fat
Heart		Fibrosis
Kidney	Perirenal Tissue	Inflammation, Chronic Nephropathy
Liver		Cytoplasmic Change, Basophilic
Lung		Bronchopneumonia, Acute Hyperplasia, Alveolar Epithelium
Lymph node	Mediastinal Lymph Node	Hemorrhage
Mammary gland	Mandibular Lymph Node	Plasmacytosis
		Dilatation, Ducts
		Fibroadenoma
		Galactocele
Pancreas		Acinar-Cell Carcinoma
Pituitary gland		Chromophobe Adenoma
Thyroid		Mineralization
Unspecified	Multiple Organs Nos	Congestion, Nos
Uterus		Leiomyosarcoma Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_046

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Bone marrow

Heart

Kidney

Liver

Lung

Mammary gland

Spleen

Unspecified

Uterus

Multiple Organs Nos

Fibrosis, Myelo

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Bronchopneumonia, Acute

Fibroadenoma

Hemosiderosis

Congestion, Nos

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 1\_047

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Clitoral gland

Heart

Kidney

Liver

Impaction, Nos

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Lymphocytic Inflammatory Infiltrate

Mammary gland

Pancreas

Thyroid

Acinus

Fibroadenoma

Atrophy, Nos

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_048

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Nos

Eye

Inflammation, Chronic

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Lung

Alveolar/Bronchiolar Adenoma

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Fibroadenoma

Pituitary gland

Chromophobe Adenoma

Salivary gland

Atrophy, Nos

Unspecified

Fibroma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 1\_049

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart

Liver

Unspecified

Multiple Organs Nos

Fibrosis

Cytoplasmic Change, Basophilic

Inflammation, Acute Necrotizing

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 1\_050

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular Pheochromocytoma
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic Neoplastic Nodule
Lymph node	Mandibular Lymph Node	Plasmacytosis
Ovary		Cyst, Nos
Pituitary gland		Chromophobe Adenoma Cyst, Nos
Salivary gland		Atrophy, Nos
Stomach		Inflammation, Chronic
Uterus	Endometrium	Hyperplasia, Epithelial

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_001

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Hyperplasia, Nodular

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Lung

Inflammation, Acute/Chronic

Pituitary gland

Cyst, Nos

Spleen

Hemosiderosis

Unspecified

Multiple Organs Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_002

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular Pheochromocytoma
Heart		Fibrosis
Intestine Small	Jejunum	Ectopia
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic Neoplastic Nodule
Lung		Histiocytosis
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma Hyperplasia, Epithelial Lactation
Pituitary gland		Chromophobe Adenoma
Thyroid		Cyst, Follicular Nos
Uterus		Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_003

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung

Edema, Nos

Unspecified

Multiple Organs Nos

Foreign Material, Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_004

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Bone marrow  
Kidney  
Liver

Lymph node  
Mammary gland  
Pituitary gland

Unspecified

Mandibular Lymph Node

Multiple Organs Nos

Osteosclerosis  
Nephropathy  
Angiectasis  
Cytoplasmic Change, Basophilic  
Plasmacytosis  
Fibroadenoma  
Cyst, Nos  
Hyperplasia, Chromophobe Cell  
Hematopoiesis

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_005

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Cytoplasmic Vacuolization

Bone marrow

Cortex Nos

Hyperplasia, Nodular

Eye

Fibrosis, Myelo

Heart

Cataract

Kidney

Fibrosis

Liver

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Neoplastic Nodule

Lung

Histiocytosis

Unspecified

Fibroadenoma

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_006

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Dilatation, Ducts
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Thymus		Thymoma, Benign
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_007

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Nos

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Lung

Bronchopneumonia, Acute

Mammary gland

Fibroadenoma

Parathyroid gland

Hyperplasia, Nos

Pituitary gland

Cyst, Nos

Spleen

Hemosiderosis

Thyroid

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_008

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Lung		Bronchopneumonia, Acute
Trachea		Inflammation, Acute
Unspecified	Multiple Organs Nos	Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_009

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Lactation
Pituitary gland		Chromophobe Adenoma
Salivary gland		Atrophy, Nos
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Congestion, Nos
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_010

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart		Alveolar/Bronchiolar Carcinoma, Invasive
Kidney		Mineralization
		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Inflammation, Granulomatous
Lung		Alveolar/Bronchiolar Carcinoma
Pituitary gland		Cyst, Nos
Unspecified	Thoracic Cavity Nos	Alveolar/Bronchiolar Carcinoma, Invasive
	Multiple Organs Nos	Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_011

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

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

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

**OBSERVATIONS**

Adrenal gland		Cortical Adenoma Pheochromocytoma
Heart		Fibrosis Inflammation, Acute
Kidney		Nephropathy
Liver	Bile Duct	Cytoplasmic Change, Basophilic Hyperplasia, Nos Neoplastic Nodule
Mammary gland		Fibroadenoma Lactation
Pancreas	Islets	Islet-Cell Adenoma
Pituitary gland		Cyst, Nos Hyperplasia, Chromophobe Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_012

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

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

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

**OBSERVATIONS**

Adrenal gland		Angiectasis
	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
		Pigmentation, Nos
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
		Inflammation, Granulomatous
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Adenoma, Nos
		Fibroadenoma
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_013

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Accidentally Killed

**HISTO:**

---

**OBSERVATIONS**

Lung

Congestion, Nos

Edema, Nos

Lymphocytic Inflammatory Infiltrate

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_014

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung		Bronchopneumonia, Acute
Spleen		Hemosiderosis
Thymus		Hemorrhage
		Necrosis, Cortical
Unspecified	Multiple Organs Nos	Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_015

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular Pheochromocytoma
Heart		Thrombosis, Nos
Kidney		Mineralization Nephropathy
Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic
	Bile Duct	Hyperplasia, Nos Neoplastic Nodule
Mammary gland		Dilatation, Ducts Galactocele Lactation
Pancreas	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Chromophobe Adenoma
Spleen		Hematopoiesis
Stomach	Fundal Gland	Dilatation, Nos
Thyroid		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_016

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Blood vessel

Pulmonary Artery Nos

Mineralization

Heart

Hemorrhage

Lung

Edema, Nos

Unspecified

Multiple Organs Nos

Lymphocytic Inflammatory Infiltrate

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_017

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland  
Kidney  
Liver

Cortex Nos

Cytoplasmic Vacuolization  
Nephropathy  
Cytoplasmic Change, Basophilic  
Cytoplasmic Change, Eosinophilic  
Cytoplasmic Vacuolization

Lung

Histiocytosis  
Hyperplasia, Alveolar Epithelium

Mammary gland

Dilatation, Ducts

Pituitary gland

Chromophobe Adenoma

Spleen

Cyst, Nos  
Hemosiderosis

Thyroid

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_018

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Accidentally Killed

**HISTO:**

---

**OBSERVATIONS**

Lung

Edema, Nos

Unspecified

Multiple Organs Nos

Foreign Material, Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_019

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland		Necrosis, Nos
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
Lung		Bronchopneumonia, Acute
		Histiocytosis
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Renal Lymph Node	Hemorrhage
Mammary gland		Cystadenoma, Nos
		Lactation
Spleen		Hematopoiesis
Unspecified	Multiple Organs Nos	Congestion, Nos
	Axilla	Fibroadenoma
	Periorbital Region	Fibroma
	Multiple Organs Nos	Plasmacytosis
Uterus	Parovarian	Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_020

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Liver

Lung

Lymph node

Mammary gland

Pancreas

Spleen

Uterus

Renal Lymph Node

Islets

Angiectasis

Nephropathy

Cytoplasmic Change, Basophilic

Histiocytosis

Hemorrhage

Fibroadenoma

Islet-Cell Adenoma

Hematopoiesis

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_021

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Accidentally Killed

**HISTO:**

---

**OBSERVATIONS**

Blood vessel

Pulmonary Artery Nos

Mineralization

Unspecified

Multiple Organs Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_022

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Clitoral gland		Adenoma, Nos
Eye		Cataract
		Retinopathy
Heart		Lymphocytic Inflammatory Infiltrate
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Dilatation, Ducts
		Fibroadenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Chromophobe Adenoma
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Hematopoiesis
Urinary bladder		Lymphocytic Inflammatory Infiltrate

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_023

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Lung

Bronchopneumonia, Acute

Pituitary gland

Cyst, Nos

Unspecified

Multiple Organs Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_024

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lymph node

Mammary gland

Parathyroid gland

Pituitary gland

Thyroid

Uterus

Bile Duct

Mandibular Lymph Node

Fallopian Tube

Pheochromocytoma

Fibrosis

Mineralization

Nephropathy

Cytoplasmic Change, Basophilic

Hyperplasia, Nos

Plasmacytosis

Fibroadenoma

Hyperplasia, Nos

Cyst, Nos

Cyst, Follicular Nos

Inflammation, Acute

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_025

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Liver

Lymph node

Mammary gland

Ovary

Parathyroid gland

Pituitary gland

Uterus

Mandibular Lymph Node

Angiectasis

Fibrosis

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Plasmacytosis

Fibroadenoma

Lipoma

Cyst, Nos

Hyperplasia, Nos

Cyst, Nos

Hyperplasia, Chromophobe Cell

Endometrial Stromal Polyp

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_026

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Congestion, Nos

Eye

Hyperplasia, Nodular

Heart

Cataract

Kidney

Retinopathy

Liver

Fibrosis

Lung

Nephropathy

Lymph node

Mandibular Lymph Node

Cytoplasmic Change, Basophilic

Mammary gland

Cytoplasmic Change, Eosinophilic

Pituitary gland

Histiocytosis

Salivary gland

Plasmacytosis

Spleen

Fibroadenoma

Stomach

Lactation

Thyroid

Cyst, Nos

Urinary bladder

Atrophy, Nos

Hemosiderosis

Inflammation, Acute

C-Cell Carcinoma

Lymphocytic Inflammatory Infiltrate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_027

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Heart		Fibrosis
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
		Neoplastic Nodule
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Hyperplasia, Cystic
Pituitary gland		Cyst, Nos
Thyroid		Hyperplasia, Follicular Cell
Unspecified	Multiple Organs Nos	Congestion, Nos
	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_028

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Lung		Foreign Material, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Unspecified	Multiple Organs Nos	Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_029

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Capsule Cortex Nos	Fibrosis Hyperplasia, Nodular
Eye		Cataract Retinopathy
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic
Lung		Histiocytosis Hyperplasia, Alveolar Epithelium Mineralization
Lymph node	Mediastinal Lymph Node Mandibular Lymph Node	Hemorrhage Plasmacytosis
Mammary gland		Hyperplasia, Epithelial
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Chromophobe Adenoma Cyst, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Thyroid		Hyperplasia, C Cell

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 2\_030

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Accidentally Killed

**HISTO:**

---

**OBSERVATIONS**

Lung

Pituitary gland

Unspecified

Multiple Organs Nos

Edema, Nos

Cyst, Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_031

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Bone marrow

Clitoral gland

Heart

Kidney

Liver

Lung

Mammary gland

Pituitary gland

Spleen

Thymus

Thyroid

Pheochromocytoma

Fibrosis, Myelo

Adenoma, Nos

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Histiocytosis

Fibroadenoma

Chromophobe Adenoma

Cyst, Nos

Hematopoiesis

Cyst, Nos

Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_032

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Medulla

Congestion, Nos

Hyperplasia, Nos

Bone marrow

Fibrosis, Myelo

Clitoral gland

Adenoma, Nos

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Lung

Histiocytosis

Lymph node

Mandibular Lymph Node

Granuloma, Nos

Mammary gland

Fibroadenoma

Salivary gland

Atrophy, Nos

Stomach

Inflammation, Acute

Thyroid

Hyperplasia, C Cell

Unspecified

Abdominal Cavity

Lipoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 2\_033

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Accidentally Killed

**HISTO:**

---

**OBSERVATIONS**

Heart		Fibrosis
Intestine Small	Jejunum	Ectopia
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
Lymph node	Mediastinal Lymph Node	Inflammation, Acute
Mammary gland		Dilatation, Ducts
Pancreas	Acinus	Atrophy, Nos
Spleen		Hemosiderosis
Unspecified	Multiple Organs Nos	Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_034

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung

Congestion, Nos

Edema, Nos

Foreign Material, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_035

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Histiocytosis
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
Pancreas	Acinus	Atrophy, Nos
	Islets	Islet-Cell Adenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Chromophobe Adenoma
Skin	Tail	Papilloma, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_036

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung

Edema, Nos

Unspecified

Multiple Organs Nos

Foreign Material, Nos

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_037

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Intestine Small

Kidney

Liver

Lung

Lymph node

Mammary gland

Spleen

Thyroid

Unspecified

Uterus

Duodenum

Mediastinal Lymph Node

Neck Nos

Cytoplasmic Vacuolization

Adenocarcinoma, Nos

Nephropathy

Cytoplasmic Change, Basophilic

Bronchopneumonia, Acute

Plasmacytosis

Lactation

Hematopoiesis

C-Cell Carcinoma

Hyperplasia, C Cell

C-Cell Carcinoma, Invasive

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_038

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lymph node

Mammary gland

Mandibular Lymph Node

Pancreas

Acinus

Islets

Pituitary gland

Unspecified

Multiple Organs Nos

Cytoplasmic Vacuolization

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Plasmacytosis

Fibroadenoma

Lactation

Atrophy, Nos

Islet-Cell Adenoma

Chromophobe Adenoma

Congestion, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_039

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland		Cytoplasmic Vacuolization
Heart		Fibrosis
		Inflammation, Acute
Intestine Large	Colon	Parasitism
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
	Bile Duct	Hyperplasia, Nos
		Necrosis, Nos
Lung		Bronchopneumonia, Acute
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Dilatation, Ducts
Pancreas	Acinus	Atrophy, Nos
Pituitary gland		Chromophobe Adenoma
Spleen		Hematopoiesis
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Congestion, Nos
		Fibroadenoma
Uterus	Endometrium	Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_040

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lymph node

Mammary gland

Pancreas

Stomach

Thyroid

Mediastinal Lymph Node

Mediastinal Lymph Node

Acinus

Cortical Adenoma

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Granuloma, Nos

Granuloma, Nos

Hemorrhage

Fibroadenoma

Atrophy, Nos

Inflammation, Acute

C-Cell Carcinoma

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_041

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Granuloma, Nos
		Histiocytosis
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
		Lactation
Pituitary gland		Chromophobe Adenoma
Thyroid		Cyst, Follicular Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_042

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Blood vessel	Splenic Artery	Inflammation, Granulomatous
Esophagus		Inflammation, Chronic
Eye		Cataract
		Retinopathy
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
Lung		Bronchopneumonia, Acute
		Granuloma, Nos
Mammary gland		Dilatation, Ducts
		Fibroadenoma
Pituitary gland		Cyst, Nos
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 2\_043

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Neoplastic Nodule
Lung		Alveolar/Bronchiolar Adenoma
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
Pituitary gland		Cyst, Nos
Unspecified	Groin	Fibroma
	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_044

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Nos
Heart		Fibrosis
Intestine Small	Mesentery Nos	Inflammation, Acute/Chronic
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Necrosis, Nos
Lung		Histiocytosis
Lymph node	Mediastinal Lymph Node	Plasmacytosis
Pancreas	Islets	Islet-Cell Adenoma
Pituitary gland		Hyperplasia, Chromophobe Cell
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Hematopoiesis
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 2\_045

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland  
Bone marrow  
Heart  
Kidney  
Liver

Angiectasis  
Fibrosis, Myelo  
Fibrosis  
Nephropathy  
Atypia, Nos  
Cytoplasmic Change, Eosinophilic  
Hyperplasia, Nos  
Necrosis, Nos  
Neoplastic Nodule  
Cyst, Nos  
Leukemia, Monocytic

Bile Duct

Pituitary gland  
Unspecified

Multiple Organs Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_046

**TRT#:** 2  
**DOSE:** 060.0 MG/KG

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

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

**OBSERVATIONS**

Adrenal gland

Cortical Adenoma  
Cytoplasmic Vacuolization  
Necrosis, Nos

Brain

Hemorrhage

Heart

Fibrosis

Kidney

Nephropathy

Liver

Bile Duct

Atypia, Nos

Hyperplasia, Nos

Necrosis, Nos

Neoplastic Nodule

Mammary gland

Fibroadenoma

Ovary

Necrosis, Nos

Pituitary gland

Cyst, Nos

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_047

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Fibrosis

Heart

Cortex Nos

Hyperplasia, Nodular

Kidney

Fibrosis

Liver

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Granuloma, Nos

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Dilatation, Ducts

Fibroadenoma

Pancreas

Islets

Islet-Cell Carcinoma

Pituitary gland

Chromophobe Adenoma

Spleen

Hemosiderosis

Thyroid

Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_048

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos Medulla	Hyperplasia, Nodular Hyperplasia, Nos
Clitoral gland		Adenoma, Nos
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic
Lung		Mineralization
Lymph node	Mediastinal Lymph Node Mandibular Lymph Node	Hemorrhage Plasmacytosis
Mammary gland		Hyperplasia, Epithelial
Pituitary gland		Chromophobe Adenoma Cyst, Nos
Stomach		Inflammation, Acute
Thyroid		Hyperplasia, C Cell
Unspecified		Fibroadenoma

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_049

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Larynx		Inflammation, Acute
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
		Necrosis, Nos
Lung		Bronchopneumonia, Acute
Mammary gland		Dilatation, Ducts
		Lactation
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Thymus		Cyst, Nos
Unspecified	Multiple Organs Nos	Congestion, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 2\_050

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 060.0 MG/KG

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Brain		Edema, Nos
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Dilatation, Ducts
		Fibroadenoma
Pituitary gland		Cyst, Nos
Unspecified	Abdomen	Basal-Cell Tumor
	Multiple Organs Nos	Hematopoiesis

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 3\_001

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart

Myocardium Nos

Inflammation, Chronic

Liver

Granuloma, Nos

Lymph node

Hepatic Lymph Node

Lymphangiectasis

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_002

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Pancreas		Atrophy, Focal
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_003

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lung

Pancreas

Thyroid

Myocardium Nos

Cortical Adenoma

Inflammation, Chronic

Calcification, Focal

Inflammation, Chronic

Granuloma, Nos

Pneumonia, Chronic Murine

Atrophy, Nos

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 3\_004

**TRT#:** 3

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Liver

Lung

Thyroid

Uterus

Pheochromocytoma

Granuloma, Nos

Pneumonia, Chronic Murine

C-Cell Adenoma

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 3\_005

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Liver		Leukemia, Myelomonocytic
Lung		Pneumonia, Chronic Murine
Thyroid		Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 3\_006

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Bone marrow

Heart

Kidney

Liver

Lung

Myocardium Nos

Atrophy, Nos

Inflammation, Chronic

Inflammation, Chronic

Granuloma, Nos

Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 3\_007

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
Lung		Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_008

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Liver		Granuloma, Nos
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_009

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart

Myocardium Nos

Inflammation, Chronic

Liver

Granuloma, Nos

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**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_010

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Lung		Alveolar/Bronchiolar Adenoma
		Pneumonia, Chronic Murine
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_011

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye		Inflammation, With Fibrosis
Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
		Inflammation, Chronic
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_012

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Clitoral gland

Heart

Intestine Small

Liver

Lung

Uterus

Myocardium Nos

Mesentery Nos

Adenocarcinoma, Nos

Inflammation, Chronic

Necrosis, Fat

Granuloma, Nos

Pneumonia, Chronic Murine

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_013

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Liver

Hepatocytes

Cytoplasmic Vacuolization

Uterus

Granuloma, Nos

Hemorrhage

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_014

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart

Myocardium Nos

Inflammation, Chronic

Liver

Granuloma, Nos

Lung

Pneumonia, Aspiration

Thyroid

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_015

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Eye

Heart

Kidney

Liver

Lung

Unspecified

Uterus

Retina

Myocardium Nos

Multiple Organs Nos

Endometrium

Cortical Adenoma

Atrophy, Nos

Inflammation, Chronic

Inflammation, Chronic

Granuloma, Nos

Pneumonia, Chronic Murine

Leukemia, Myelomonocytic

Cyst, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_016

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
		Inflammation, Chronic
Liver		Focal Cellular Change
		Hernia, Nos
Lung		Pneumonia, Chronic Murine
Pituitary gland		Hyperplasia, Chromophobe Cell
Thyroid		Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_017

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change
		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Mammary gland		Adenoma, Nos
Ovary		Cyst, Nos
Pituitary gland		Adenoma, Nos
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_018

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Brain		Atrophy, Pressure
Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change
Pituitary gland		Adenoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_019

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Bone marrow

Heart

Kidney

Liver

Lung

Myocardium Nos

Atrophy, Nos

Inflammation, Chronic

Inflammation, Chronic

Granuloma, Nos

Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_020

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung		Sarcoma, Nos, Metastatic
Unspecified	Ear	Sarcoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_021

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Liver		Focal Cellular Change
Lung		Pneumonia, Chronic Murine
Ovary		Cyst, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_022

**TRT#:** 3

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Bone marrow

Kidney

Liver

Atrophy, Nos

Inflammation, Chronic

Granuloma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_023

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart

Myocardium Nos

Inflammation, Chronic

Intestine Small

Mesentery Nos

Necrosis, Fat

Liver

Granuloma, Nos

Pancreas

Atrophy, Focal

Pituitary gland

Adenoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_024

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Focal

Bone marrow

Hyperplasia, Stromal

Heart

Myocardium Nos

Inflammation, Chronic

Lung

Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_025

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
		Inflammation, Chronic
Lung		Pneumonia, Chronic Murine
Pancreas	Islets	Hyperplasia, Focal
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_026

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Heart

Myocardium Nos

Inflammation, Chronic

Liver

Granuloma, Nos

Lung

Pneumonia, Chronic Murine

Pituitary gland

Adenoma, Nos

Uterus

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_027

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
		Nephrosis, Hydro
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Pancreas		Atrophy, Focal
Pituitary gland		Adenoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_028

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Heart

Myocardium Nos

Inflammation, Chronic

Kidney

Calcification, Focal

Liver

Granuloma, Nos

Lung

Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_029

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Heart

Myocardium Nos

Inflammation, Chronic

Kidney

Inflammation, Chronic

Liver

Granuloma, Nos

Lung

Pneumonia, Chronic Murine

Pituitary gland

Adenoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_030

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Brain		Atrophy, Pressure
Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
		Inflammation, Chronic
Liver		Granuloma, Nos
Pituitary gland		Adenoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_031

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Liver		Focal Cellular Change
		Granuloma, Nos
Pancreas		Atrophy, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_032

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
		Inflammation, Chronic
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_033

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Lymph node		Lymphangiectasis
Pituitary gland		Hyperplasia, Chromophobe Cell
Thyroid		C-Cell Carcinoma
Uterus		Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_034

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_035

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Degeneration, Lipoid

Heart

Myocardium Nos

Inflammation, Chronic

Kidney

Inflammation, Chronic

Liver

Granuloma, Nos

Lung

Granuloma, Nos

Lymph node

Mandibular Lymph Node

Pneumonia, Chronic Murine

Ovary

Plasmacytosis

Pituitary gland

Cyst, Nos

Cyst, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_036

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Heart

Myocardium Nos

Inflammation, Chronic

Liver

Granuloma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_037

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Heart

Myocardium Nos

Inflammation, Chronic

Lung

Pneumonia, Chronic Murine

Lymph node

Lymphangiectasis

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Uterus

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_038

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Degeneration, Lipoid

Heart

Myocardium Nos

Inflammation, Chronic

Kidney

Inflammation, Chronic

Liver

Focal Cellular Change

Granuloma, Nos

Lung

Pneumonia, Chronic Murine

Thyroid

C-Cell Adenoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_039

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart

Myocardium Nos

Inflammation, Chronic

Kidney

Inflammation, Chronic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_040

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Spleen		Fibrosis
		Hemosiderosis

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_041

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Heart

Myocardium Nos

Inflammation, Chronic

Kidney

Hyperplasia, Epithelial

Inflammation, Chronic

Liver

Granuloma, Nos

Lung

Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_042

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Lung		Pneumonia, Chronic Murine
Unspecified	Abdominal Cavity	Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_043

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Liver

Granuloma, Nos

Lung

Pneumonia, Chronic Murine

Uterus

Endometrial Stromal Polyp

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_044

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Liver		Granuloma, Nos
Lung		Pneumonia, Chronic Murine
Pituitary gland		Adenoma, Nos
Unspecified	Diaphragm Nos	Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_045

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye  
Liver  
Lung  
Pituitary gland

Retina

Atrophy, Nos  
Hernia, Nos  
Pneumonia, Chronic Murine  
Cyst, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_046

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
Liver		Granuloma, Nos
		Hernia, Nos
Lung		Pneumonia, Chronic Murine
Skin	Face	Squamous Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_047

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Calcification, Focal
Lung		Pneumonia, Chronic Murine

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_048

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Kidney		Inflammation, Chronic
Lung		Pneumonia, Chronic Murine
Pituitary gland		Adenoma, Nos
Spleen		Hypertrophy, Nos
Thyroid		Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 3\_049

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Liver

Lung

Thyroid

Granuloma, Nos

Alveolar/Bronchiolar Adenoma

Pneumonia, Chronic Murine

Hyperplasia, C Cell

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 3\_050

**TRT#:** 3

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic
Liver		Hernia, Nos
Lung		Pneumonia, Chronic Murine
Pituitary gland		Adenoma, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 4\_001

**TRT#:** 4  
**DOSE:** 0

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Liver		Cytoplasmic Change, Basophilic Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis Hyperplasia, Alveolar Epithelium
Lymph node	Mediastinal Lymph Node	Hemorrhage
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Nos
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Thyroid		Cyst, Follicular Nos Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Mineralization

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 4\_002

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Eye  
Intestine Small  
Kidney  
Liver  
Mammary gland  
Pituitary gland  
Spleen

Cortex Nos  
  
Mesentery Nos  
  
Bile Duct

Hyperplasia, Nodular  
Retinopathy  
Lipoma  
Nephropathy  
Hyperplasia, Nos  
Lactation  
Chromophobe Adenoma  
Hemosiderosis

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 4\_003

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Brain

Edema, Nos

Eye

Cataract

Mineralization

Retinopathy

Kidney

Mineralization

Liver

Cytoplasmic Change, Basophilic

Bile Duct

Hyperplasia, Nos

Inflammation, Acute/Chronic

Mammary gland

Dilatation, Ducts

Fibroadenoma

Pituitary gland

Chromophobe Adenoma

Stomach

Cyst, Nos

Uterus

Endometrial Stromal Polyp

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 4\_004

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Brain		Edema, Nos
Eye		Retinopathy
Kidney		Nephropathy
Liver	Bile Duct	Hyperplasia, Nos
Lymph node	Mandibular Lymph Node	Necrosis, Nos
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Lactation
Pituitary gland		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:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 4\_005

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Mineralization
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
Mammary gland		Dilatation, Ducts
Unspecified		Fibroadenoma
Uterus		Endometrial Stromal Sarcoma

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 4\_006

**TRT#:** 4

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
Pancreas	Acinus	Atrophy, Nos
Pituitary gland		Chromophobe Adenoma
Unspecified		Fibrosarcoma
Uterus		Thrombosis, Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_007

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Medulla	Hyperplasia, Nos
Heart		Fibrosis
Intestine Small	Mesentery Nos	Necrosis, Fat
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis
Mammary gland		Lactation
Pancreas	Acinus	Atrophy, Nos
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Thyroid		Hyperplasia, C Cell
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 4\_008

**TRT#:** 4  
**DOSE:** 0

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Cortical Adenoma
Heart		Fibrosis
Kidney		Mineralization
		Nephropathy
Liver		Atypia, Nos
	Bile Duct	Cytoplasmic Change, Basophilic
		Hyperplasia, Nos
		Necrosis, Nos
		Thrombosis, Nos
Lymph node	Mandibular Lymph Node	Plasmacytosis
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Angiectasis
		Cyst, Nos
Stomach		Inflammation, Acute/Chronic
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_009

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Cytoplasmic Vacuolization

Heart

Medulla

Hyperplasia, Nos

Liver

Fibrosis

Cytoplasmic Change, Basophilic

Lung

Granuloma, Nos

Lymph node

Mediastinal Lymph Node

Hemorrhage

Mammary gland

Mandibular Lymph Node

Hemorrhage

Pituitary gland

Plasmacytosis

Spleen

Lactation

Stomach

Cyst, Nos

Uterus

Hemosiderosis

Endometrium

Inflammation, Acute

Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 4\_010

**TRT#:** 4

**DOSE:** 0

**SEX:** Female

**DISP:** Natural Death

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Liver

Lung

Pituitary gland

Spleen

Unspecified

Multiple Organs Nos

Mineralization

Cytoplasmic Change, Eosinophilic

Bronchopneumonia, Acute

Cyst, Nos

Hemosiderosis

Congestion, Nos

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_011

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Heart

Medulla

Hyperplasia, Nos

Kidney

Fibrosis

Liver

Nephropathy

Cytoplasmic Change, Basophilic

Cytoplasmic Change, Eosinophilic

Lymph node

Bile Duct

Hyperplasia, Nos

Pancreas

Mandibular Lymph Node

Plasmacytosis

Pituitary gland

Atrophy, Nos

Chromophobe Adenoma

Unspecified

Multiple Organs Nos

Cyst, Nos

Uterus

Leukemia, Monocytic

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 4\_012

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
Lung		Alveolar/Bronchiolar Carcinoma
		Histiocytosis
Pituitary gland		Angiectasis
		Cyst, Nos
Spleen		Hemosiderosis
Uterus	Endometrium	Hyperplasia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_013

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Lymph node

Pituitary gland

Stomach

Thyroid

Unspecified

Urinary bladder

Mandibular Lymph Node

Multiple Organs Nos

Pheochromocytoma

Fibrosis

Mineralization

Nephropathy

Cytoplasmic Change, Basophilic

Granuloma, Nos

Necrosis, Nos

Thrombosis, Nos

Plasmacytosis

Cyst, Nos

Inflammation, Nos

C-Cell Adenoma

Leukemia, Monocytic

Lymphocytic Inflammatory Infiltrate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_014

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney  
Liver

Cortex Nos

Hyperplasia, Nodular  
Nephropathy  
Abnormal Curvature  
Cytoplasmic Change, Basophilic  
Cytoplasmic Change, Eosinophilic  
Cytoplasmic Vacuolization

Lymph node  
Mammary gland

Mediastinal Lymph Node

Granuloma, Nos  
Plasmacytosis  
Dilatation, Ducts  
Fibroadenoma  
Inflammation, Granulomatous

Parathyroid gland  
Pituitary gland  
Spleen  
Stomach

Hyperplasia, Nos  
Chromophobe Adenoma  
Hemosiderosis  
Hyperplasia, Epithelial  
Inflammation, Acute

Thyroid  
Uterus

Endometrium

C-Cell Adenoma  
Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 4\_015

**TRT#:** 4  
**DOSE:** 0

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Adrenal gland		Cytoplasmic Vacuolization
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Granuloma, Nos
Lung		Hemorrhage
		Histiocytosis
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
		Lactation
Pituitary gland		Chromophobe Adenoma
		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Thyroid		Cyst, Follicular Nos
		Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 4\_016

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Brain		Hemorrhage
Heart		Fibrosis
Liver		Cytoplasmic Change, Basophilic
Pituitary gland		Hyperplasia, Chromophobe Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_017

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Heart

Fibrosis

Liver

Cytoplasmic Change, Basophilic

Bile Duct

Hyperplasia, Nos

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Lactation

Parathyroid gland

Adenoma, Nos

Pituitary gland

Chromophobe Adenoma

Thymus

Cyst, Nos

Unspecified

Multiple Organs Nos

Cyst, Nos

Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_018

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
	Medulla	Hyperplasia, Nos
Blood vessel	Pulmonary Artery Nos	Mineralization
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
Ovary		Cyst, Nos
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Hyperplasia, Epithelial
		Inflammation, Acute
Thyroid		Hyperplasia, C Cell
Unspecified	Adipose Tissue	Inflammation, Granulomatous
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 4\_019

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Granuloma, Nos

Lymph node

Mediastinal Lymph Node

Hemorrhage

Mammary gland

Lactation

Pituitary gland

Chromophobe Carcinoma

Spleen

Hemosiderosis

Thymus

Cyst, Nos

Thyroid

C-Cell Adenoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** 2,4- & 2,6-Toluene diisocyanate  
**CAS Number:** 26471-62-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 14:00:15  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 4\_020

**TRT#:** 4  
**DOSE:** 0

**SEX:** Female  
**DISP:** Scheduled Sacrifice

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

**OBSERVATIONS**

Kidney		Nephropathy
Liver		Abnormal Curvature
		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Granuloma, Nos
Lung		Histiocytosis
Lymph node	Mediastinal Lymph Node	Pigmentation, Nos
	Mandibular Lymph Node	Plasmacytosis
Pituitary gland		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Thyroid		Cyst, Follicular Nos
Uterus		Adenocarcinoma, Nos
	Endometrium	Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_021

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Lymph node

Bile Duct

Hyperplasia, Nos

Mammary gland

Mandibular Lymph Node

Plasmacytosis

Pituitary gland

Inflammation, Acute

Spleen

Chromophobe Adenoma

Stomach

Cyst, Nos

Uterus

Granuloma, Nos

Hemosiderosis

Inflammation, Acute

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

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**ANIMAL ID:** 4\_022

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Medulla

Hyperplasia, Nos

Blood vessel

Pulmonary Artery Nos

Mineralization

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Granuloma, Nos

Lung

Hemorrhage

Mammary gland

Dilatation, Ducts

Pituitary gland

Chromophobe Adenoma

Spleen

Hemosiderosis

Stomach

Inflammation, Acute

Thyroid

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

---

**ANIMAL ID:** 4\_023

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Deposit, Nos
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
Lung		Histiocytosis
Mammary gland		Fibroadenoma
Parathyroid gland		Hyperplasia, Nos
Pituitary gland		Cyst, Nos
Thyroid		C-Cell Adenoma
Unspecified	Multiple Organs Nos	Mineralization

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_024

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Kidney		Mineralization
		Nephropathy
Liver		Abnormal Curvature
		Cytoplasmic Change, Basophilic
Lung		Histiocytosis
Lymph node	Mandibular Lymph Node	Plasmacytosis
Pancreas		Cyst, Nos
Pituitary gland		Chromophobe Adenoma
Stomach		Inflammation, Acute
Thyroid		Cyst, Follicular Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus	Endometrium	Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_025

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Kidney  
Liver

Cortex Nos

Hyperplasia, Nodular  
Nephropathy  
Cytoplasmic Change, Basophilic  
Cytoplasmic Change, Eosinophilic  
Granuloma, Nos

Lymph node  
Pituitary gland  
Spleen  
Stomach  
Thyroid

Bile Duct  
Mandibular Lymph Node

Hyperplasia, Nos  
Plasmacytosis  
Pigmentation, Nos  
Hemosiderosis  
Inflammation, Acute  
Hyperplasia, C Cell

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_026

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Blood vessel	Pulmonary Artery Nos	Mineralization
Heart		Fibrosis
Kidney		Nephropathy
		Pyelonephritis, Chronic
Liver		Abnormal Curvature
		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
Lymph node	Mandibular Lymph Node	Plasmacytosis
Pituitary gland		Cyst, Nos
Stomach		Inflammation, Acute
Thyroid		Hyperplasia, C Cell
Unspecified	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_027

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Cytoplasmic Vacuolization

Cortex Nos

Hyperplasia, Nodular

Pheochromocytoma

Clitoral gland

Carcinoma, Nos

Heart

Fibrosis

Kidney

Nephropathy

Pigmentation, Nos

Liver

Cytoplasmic Change, Basophilic

Necrosis, Nos

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Lactation

Spleen

Hematopoiesis

Stomach

Hyperplasia, Epithelial

Unspecified

Groin

Fibrosarcoma

Multiple Organs Nos

Fibrosarcoma, Metastatic

Multiple Organs Nos

Leukemia, Monocytic

Uterus

Endometrium

Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_028

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Bile Duct

Lymph node

Mandibular Lymph Node

Mammary gland

Pituitary gland

Spleen

Stomach

Uterus

Congestion, Nos

Fibrosis

Mineralization

Nephropathy

Cytoplasmic Change, Basophilic

Hyperplasia, Nos

Necrosis, Nos

Plasmacytosis

Fibroadenoma

Chromophobe Adenoma

Hemosiderosis

Hyperplasia, Epithelial

Inflammation, Acute

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_029

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
Lymph node	Mediastinal Lymph Node	Hemorrhage
	Mediastinal Lymph Node	Plasmacytosis
Mammary gland		Lactation
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Stomach		Hyperplasia, Epithelial
		Inflammation, Acute
Uterus	Endometrium	Cyst, Nos
		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_030

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Cytoplasmic Vacuolization
Heart		Fibrosis
Kidney		Congestion, Nos
		Nephropathy
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Vacuolization
	Bile Duct	Hyperplasia, Nos
		Pigmentation, Nos
Pituitary gland		Cyst, Nos
Spleen		Depletion, Lymphoid
Thyroid		Follicular-Cell Carcinoma
Unspecified	Multiple Organs Nos	Lymphoma, Nos-Malignant
Urinary bladder		Lymphocytic Inflammatory Infiltrate

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_031

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Intestine Small	Mesentery Nos	Lipoma
Kidney		Cyst, Nos
Liver		Cytoplasmic Change, Basophilic
		Granuloma, Nos
Lymph node	Pancreatic Lymph Node	Edema, Nos
Mammary gland		Hyperplasia, Epithelial
Pituitary gland		Chromophobe Adenoma
		Cyst, Nos
Spleen		Hemosiderosis
Stomach		Hyperplasia, Epithelial
		Inflammation, Acute

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:15

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

**Lab:** NA

**ANIMAL ID:** 4\_032

**TRT#:** 4

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Liver

Mammary gland

Pancreas

Pituitary gland

Spleen

Stomach

Thyroid

Acinus

Cortical Adenoma

Fibrosis

Nephropathy

Cytoplasmic Change, Basophilic

Granuloma, Nos

Fibroadenoma

Lactation

Atrophy, Nos

Cyst, Nos

Hemosiderosis

Inflammation, Acute

C-Cell Adenoma

Cyst, Follicular Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_033

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Eye  
Heart  
Kidney  
Liver

Cortex Nos

Cytoplasmic Vacuolization  
Retinopathy  
Fibrosis  
Nephropathy  
Abnormal Curvature  
Cytoplasmic Change, Basophilic  
Hyperplasia, Nos  
Histiocytosis  
Plasmacytosis  
Hyperplasia, Chromophobe Cell  
Hemosiderosis  
Inflammation, Acute

Lung  
Lymph node  
Pituitary gland  
Spleen  
Stomach

Bile Duct

Mandibular Lymph Node

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_034

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye		Cataract
Heart		Fibrosis
Kidney		Mineralization
		Nephropathy
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis
Lymph node		Plasmacytosis
Mammary gland	Mandibular Lymph Node	Fibroadenoma
Pancreas		Atrophy, Nos
Pituitary gland	Acinus	Chromophobe Adenoma
		Cyst, Nos
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_035

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Eye		Cataract
		Retinopathy
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Eosinophilic
	Bile Duct	Granuloma, Nos
		Hyperplasia, Nos
		Neoplastic Nodule
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Dilatation, Ducts
Pituitary gland		Chromophobe Adenoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_036

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Medulla

Hyperplasia, Nos

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Lymph node

Mandibular Lymph Node

Plasmacytosis

Pituitary gland

Cyst, Nos

Spleen

Hemosiderosis

Stomach

Fundal Gland

Dilatation, Nos

Thyroid

C-Cell Carcinoma

Unspecified

Multiple Organs Nos

Congestion, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

---

**ANIMAL ID:** 4\_037

**TRT#:** 4

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Brain  
Heart  
Kidney  
Liver  
Mammary gland

Ovary  
Pituitary gland  
Thyroid  
Unspecified

Multiple Organs Nos

Mineralization  
Fibrosis  
Nephropathy  
Cytoplasmic Change, Basophilic  
Dilatation, Ducts  
Fibroadenoma  
Cyst, Nos  
Chromophobe Adenoma  
Hyperplasia, C Cell  
Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_038

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Stomach

Squamous Cell Papilloma

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_039

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hyperplasia, Nodular
Heart		Fibrosis
Liver		Cytoplasmic Change, Basophilic Cytoplasmic Change, Eosinophilic
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis
		Hyperplasia, Alveolar Epithelium
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
Pituitary gland		Chromophobe Adenoma
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Thyroid		Hyperplasia, C Cell
Uterus	Parovarian	Lipoma
	Parovarian	Necrosis, Fat

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_040

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Nodular

Heart

Fibrosis

Kidney

Nephropathy

Liver

Cytoplasmic Change, Eosinophilic

Neoplastic Nodule

Lung

Histiocytosis

Lymph node

Mandibular Lymph Node

Plasmacytosis

Mammary gland

Fibroadenoma

Pituitary gland

Chromophobe Adenoma

Spleen

Hemosiderosis

Uterus

Endometrium

Cyst, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_041

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland  
Heart  
Kidney

Cortex Nos

Cytoplasmic Vacuolization

Liver

Fibrosis

Mineralization

Pigmentation, Nos

Abnormal Curvature

Cytoplasmic Change, Basophilic

Mammary gland

Bile Duct

Hyperplasia, Nos

Fibroadenoma

Lactation

Ovary

Cyst, Follicular Nos

Pituitary gland

Chromophobe Adenoma

Stomach

Inflammation, Acute

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_042

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Hyperplasia, Focal

Brain

Pons Nos

Chromophobe Carcinoma, Metastatic

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Granuloma, Nos

Lymph node

Mandibular Lymph Node

Hemorrhage

Mammary gland

Dilatation, Ducts

Fibroadenoma

Parathyroid gland

Hyperplasia, Nos

Pituitary gland

Chromophobe Carcinoma

Spleen

Leukemia, Monocytic

Stomach

Inflammation, Acute

Thyroid

Cyst, Follicular Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

---

**ANIMAL ID:** 4\_043

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Brain		Hemorrhage
Heart		Fibrosis
Liver		Atypia, Nos
	Bile Duct	Hyperplasia, Nos
Mammary gland		Lactation
Pituitary gland		Hyperplasia, Chromophobe Cell
Thymus		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:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_044

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pigmentation, Nos

Liver

Cytoplasmic Change, Basophilic

Bile Duct

Hyperplasia, Nos

Mammary gland

Fibroadenoma

Hyperplasia, Epithelial

Pituitary gland

Cyst, Nos

Thyroid

Cyst, Follicular Nos

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

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**ANIMAL ID:** 4\_045

**TRT#:** 4

**DOSE:** 0

**SEX:** Female

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

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**OBSERVATIONS**

Heart		Fibrosis
Liver		Cytoplasmic Change, Basophilic
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Lactation
Pancreas		Fibrosis
Pituitary gland		Chromophobe Adenoma
Thyroid		C-Cell Adenoma
Unspecified	Abdomen	Fibroadenoma
	Multiple Organs Nos	Leukemia, Monocytic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

---

**ANIMAL ID:** 4\_046

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney

Nephropathy

Liver

Cytoplasmic Change, Basophilic

Lung

Granuloma, Nos

Pituitary gland

Histiocytosis

Spleen

Chromophobe Adenoma

Stomach

Hemosiderosis

Thyroid

Inflammation, Acute

Cyst, Follicular Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_047

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Blood vessel	Pulmonary Artery Nos	Mineralization
Brain		Hydrocephalus, Nos
Heart		Fibrosis
Kidney		Nephropathy
Liver		Cytoplasmic Change, Basophilic
	Bile Duct	Hyperplasia, Nos
Lung		Histiocytosis
		Lymphocytic Inflammatory Infiltrate
Lymph node	Mandibular Lymph Node	Plasmacytosis
Mammary gland		Fibroadenoma
Pituitary gland		Chromophobe Adenoma
Unspecified	Multiple Organs Nos	Congestion, Nos
	Multiple Organs Nos	Leukemia, Monocytic
Uterus		Cyst, Nos

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_048

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Cytoplasmic Vacuolization

Heart

Cortex Nos

Hyperplasia, Nodular

Kidney

Fibrosis

Nephropathy

Liver

Pigmentation, Nos

Cytoplasmic Change, Eosinophilic

Mammary gland

Neoplastic Nodule

Lactation

Pancreas

Dilatation, Ducts

Pituitary gland

Chromophobe Adenoma

Stomach

Hyperplasia, Epithelial

Thyroid

Hyperplasia, C Cell

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Uterus

Endometrium

Inflammation, Acute

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_049

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Congestion, Nos

Heart

Hyperplasia, Nodular

Kidney

Fibrosis

Liver

Mineralization

Lung

Nephropathy

Lymph node

Cytoplasmic Change, Basophilic

Mammary gland

Granuloma, Nos

Pancreas

Mandibular Lymph Node

Plasmacytosis

Pituitary gland

Acinus

Fibroadenoma

Stomach

Atrophy, Nos

Thyroid

Fibrosis

Unspecified

Multiple Organs Nos

Chromophobe Adenoma

Uterus

Mineralization

Inflammation, Acute

Cyst, Follicular Nos

Hyperplasia, C Cell

Leukemia, Monocytic

Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50533

**Test Type:** Long-Term

**Route:** Gavage

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** 2,4- & 2,6-Toluene diisocyanate

**CAS Number:** 26471-62-5

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

**Time Report Requested:** 14:00:16

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

**Lab:** NA

**ANIMAL ID:** 4\_050

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

**OBSERVATIONS**

Heart		Fibrosis
Intestine Small	Jejunum	Ectopia
Liver		Cytoplasmic Change, Basophilic
		Cytoplasmic Change, Eosinophilic
		Granuloma, Nos
	Bile Duct	Hyperplasia, Nos
Pituitary gland		Adenoma, Nos
		Chromophobe Adenoma
Spleen		Hemosiderosis
Stomach		Inflammation, Acute
Thyroid		Cyst, Follicular Nos
Uterus		Endometrial Stromal Polyp

**PRIMARY CAUSE OF DEATH**

-

**\*\* END OF REPORT \*\***