

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**C Number:** C54842  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Female

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Brain		Mineralization
Lymph node		Hyperplasia, Reticulum Cell
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Cyst, Nos
Spleen	Follicles	Hyperplasia, Lymphoid

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_002

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

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**OBSERVATIONS**

Lung		Hemorrhage
		Pneumonia, Aspiration
Ovary		Pigmentation, Nos
Skin	Shaft	Pigmentation, Nos
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Adrenal gland

Cortex Nos

Congestion, Acute

Lung

Pleural Cavity Nos

Hematoma, Organized

Unspecified

Multiple Organs Nos

Lymphoma, Lymphocytic-Malignant Type

Uterus

Endometrium

Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_004

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

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

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

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**OBSERVATIONS**

Ovary		Pigmentation, Nos
Pancreas	Acinus	Atrophy, Focal
Uterus		Dilatation, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Liver		Hepatocellular Adenoma
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_006

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

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

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

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**OBSERVATIONS**

Adrenal gland	Medulla	Pheochromocytoma
Brain		Mineralization
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Hyperplasia, Lymphoid
Stomach		Inflammation, Acute/Chronic
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_007

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

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

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

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**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Harderian gland	Hardarian Gland	Adenocarcinoma, Nos
Liver		Hematopoiesis
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hypoplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hypertrophy, Focal
Kidney	Cortex	Nephropathy
Liver		Hepatocellular Adenoma
Lung		Congestion, Acute
		Hemorrhage
Ovary		Necrosis, Fat
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Diffuse
Uterus	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_009

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Kidney  
Pancreas  
Skin

Cortex  
Acinus  
Shaft

Nephropathy  
Atrophy, Focal  
Pigmentation, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_010

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_011

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Unspecified	Multiple Organs Nos	Lymphoma, Nos-Malignant
Uterus		Dilatation, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_012

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Brain		Mineralization
Intestine Small	Ileum	Parasitism
Kidney	Cortex	Nephropathy
Pancreas	Acinus	Atrophy, Focal
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_013

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Intestine Large

Liver

Ovary

Pancreas

Salivary gland

Skin

Spleen

Unspecified

Uterus

Colon

Centrilobular

Hepatocytes

Acinus

Shaft

Follicles

Multiple Organs Nos

Parovarian

Parasitism

Atrophy, Diffuse

Necrosis, Focal

Atrophy, Senile

Atrophy, Focal

Atrophy, Focal

Pigmentation, Nos

Hypoplasia, Lymphoid

Lymphoma, Histiocytic-Malignant Type

Cyst, Hemorrhagic

Dilatation, Nos

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_014

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

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

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

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**OBSERVATIONS**

Pancreas  
Skin  
Uterus

Acinus  
Shaft

Atrophy, Focal  
Pigmentation, Nos  
Dilatation, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_015

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Pancreas  
Skin  
Spleen  
Uterus

Acinus  
Shaft  
Follicles  
  
Endometrium

Atrophy, Focal  
Pigmentation, Nos  
Hyperplasia, Lymphoid  
Dilatation, Nos  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**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**

Bone marrow		Hyperplasia, Granulocytic
Brain		Mineralization
Liver		Hepatocellular Carcinoma
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Diffuse

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_017

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

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

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

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**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Lymphoma, Histiocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Brain		Mineralization
Liver		Hepatocellular Carcinoma
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_019

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

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

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

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**OBSERVATIONS**

Liver		Inflammation, Acute/Chronic
Pancreas	Acinus	Atrophy, Focal
Salivary gland		Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_020

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

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

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

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**OBSERVATIONS**

Brain		Mineralization
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Cyst, Nos
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Lymphoid

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_021

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Lymph node	Pancreatic Lymph Node	Lymphoma, Lymphocytic-Malignant Type
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Skin	Dermis	Inflammation, Chronic Suppurative
	Shaft	Pigmentation, Nos
	Epidermis	Ulcer, Chronic
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Diffuse
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Focal

PRIMARY CAUSE OF DEATH

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain		Mineralization
Heart	Epicardium	Inflammation, Acute/Chronic
Intestine Small	Peyers Patch	Hyperplasia, Lymphoid
Liver		Hematopoiesis
Lymph node	Mesenteric Lymph Node	Sarcoma, Nos, Uncertain Primary Or Meta
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
	Acinus	Hyperplasia, Focal
	Acinus	Inflammation, With Fibrosis
Salivary gland		Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Unspecified	Mediastinum Nos	Inflammation, Chronic Focal
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Natural Death

**HISTO:**

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**OBSERVATIONS**

Brain		Mineralization
Liver	Hepatocytes	Necrosis, Focal
Lung		Leukocytosis, Nos
Mammary gland		Adenocarcinoma, Nos
Ovary		Cyst, Nos
Skin	Shaft	Pigmentation, Nos
Spleen	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hypoplasia, Nos

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_024

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

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

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

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**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Ovary

Cyst, Nos

Pancreas

Acinus

Skin

Shaft

Atrophy, Focal

Uterus

Endometrium

Pigmentation, Nos

Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_026

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Natural Death

**HISTO:**

**OBSERVATIONS**

Adrenal gland  
Heart  
Intestine Small  
Lymph node

Atrium  
Intestinal Villus, Ileum  
Renal Lymph Node  
Mesenteric Lymph Node

Mesenteric Lymph Node  
Intermedia

Pituitary gland  
Salivary gland  
Skin  
Thymus

Shaft

Unspecified

Multiple Organs Nos  
Multiple Organs Nos

Hematopoiesis  
Thrombus, Organized  
Atrophy, Focal  
Hemorrhage  
Hemorrhage, Chronic  
Inflammation, Chronic Focal  
Inflammation, Chronic Suppurative  
Adenoma, Nos  
Atrophy, Focal  
Pigmentation, Nos  
Depletion, Lymphoid  
Histiocytosis  
Hematopoiesis  
Lymphoma, Mixed-Malignant Type

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_027

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Lung		Histiocytosis
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Uterus	Endometrium	Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_028

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

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

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

---

**OBSERVATIONS**

Heart		Periarteritis
Liver	Hepatocytes	Cytoplasmic Vacuolization
Pancreas	Acinus	Atrophy, Focal
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Pancreas  
Spleen  
Uterus

Acinus  
Follicles

Atrophy, Focal  
Hyperplasia, Lymphoid  
Dilatation, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_030

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

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

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

---

**OBSERVATIONS**

Lung		Adenocarcinoma, Nos, Metastatic
Mammary gland		Adenocarcinoma, Nos
Ovary		Cyst, Hemorrhagic
Pancreas		Necrosis, Fat
	Duct Nos	Necrosis, Nos
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hypoplasia, Lymphoid

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Adrenal gland  
Bone marrow

Liver  
Lung

Pancreas  
Uterus

Acinus  
Endometrium

Pheochromocytoma  
Fibrosis, Myelo  
Hypoplasia, Nos  
Hyperplasia, Lymphoid  
Arteriosclerosis, Nos  
Inflammation, Interstitial  
Atrophy, Focal  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_032

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Lung		Alveolar/Bronchiolar Adenoma
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Cyst, Nos
Uterus	Endometrium	Atrophy, Focal
	Endometrium	Dilatation, Nos
	Endometrium	Edema, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_033

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Brain		Mineralization
Pancreas	Acinus	Atrophy, Focal
Salivary gland		Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic
		Squamous Cell Carcinoma, In Situ

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_034

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

**SEX:** Female  
**DISP:** Accidentally Killed

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

**OBSERVATIONS**

Bone marrow		Congestion, Acute
Brain		Mineralization
Liver		Congestion, Acute Degeneration, Lipoid
Lung		Congestion, Acute
	Pleural Cavity Nos	Foreign Body, Nos
	Pleural Cavity Nos	Inflammation, Acute Suppurative
Ovary		Cyst, Hemorrhagic
Salivary gland		Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Thymus	Lymphocytes	Necrosis, Diffuse
Unspecified	Mediastinum Nos	Foreign Body, Nos
	Mediastinum Nos	Inflammation, Acute Suppurative
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_035

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

**SEX:** Female  
**DISP:** Accidentally Killed

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Congestion, Nos
Bone marrow		Congestion, Acute
Ovary		Cyst, Follicular Nos
Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Trachea	Peritracheal Tissue	Inflammation, Acute Focal
Unspecified	Mediastinum Nos	Foreign Body, Nos
	Mediastinum Nos	Inflammation, Acute Suppurative
Uterus		Dilatation, Nos

PRIMARY CAUSE OF DEATH

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_036

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

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

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

---

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Uterus	Endometrium	Hyperplasia, Diffuse

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_037

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

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

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

---

**OBSERVATIONS**

Brain	Meninges	Fibrosis, Multifocal
Kidney		Hyperplasia, Lymphoid
Liver		Hyperplasia, Lymphoid
Stomach	Cardiac Stomach	Inflammation, Acute/Chronic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain		Mineralization
Eye	Cornea	Inflammation, Acute Diffuse
Harderian gland	Harderian Gland	Adenocarcinoma, Nos
Lung		Adenocarcinoma, Nos, Metastatic
Lymph node	Mesenteric Lymph Node	Inflammation, Acute Suppurative
Pancreas	Acinus	Atrophy, Focal
Uterus	Endometrium	Hyperplasia, Cystic
		Inflammation, Suppurative

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 1\_039

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Moribund Sacrifice

**HISTO:**

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Brain		Mineralization
Liver		Inflammation, Acute/Chronic
Lymph node		Congestion, Acute
		Hemorrhage
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Hemorrhage, Chronic
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Unspecified	Back	Fibrosarcoma
Uterus		Endometrial Stromal Polyp
	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain		Inflammation, Acute/Chronic Mineralization
Kidney	Cortex	Nephropathy
Liver	Hepatocytes	Degeneration, Lipoid Hepatocellular Carcinoma
Pancreas	Acinus	Atrophy, Focal
Salivary gland		Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Unspecified	Mediastinum Nos	Hemorrhage
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Brain		Mineralization
Kidney	Cortex	Nephropathy
Lymph node	Mesenteric Lymph Node	Hematopoiesis
	Mesenteric Lymph Node	Hemorrhage
	Tracheal Lymph Node	Hyperplasia, Lymphoid
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
		Hyperplasia, Lymphoid
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Stomach	Fundal Gland	Dilatation, Nos
Uterus	Endometrium	Hypoplasia, Nos

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_042

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

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

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

---

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Lung		Alveolar/Bronchiolar Carcinoma
Pancreas	Acinus	Atrophy, Focal Hyperplasia, Lymphoid
Skin	Shaft	Pigmentation, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 1\_043

**TRT#:** 1

**SEX:** Female

**DAY ON TEST:**

**DOSE:** 120.0 MG/KG

**DISP:** Terminal Sacrifice

**HISTO:**

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**OBSERVATIONS**

Brain		Mineralization
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Hyperplasia, Lymphoid
Unspecified	Multiple Organs Nos	Lymphoma, Nos-Malignant

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_044

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Kidney	Cortex	Metaplasia, Osseous
Pancreas	Acinus	Atrophy, Focal
Skin	Dermis	Fibrosis, Diffuse
	Shaft	Pigmentation, Nos
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_045

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

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

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

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**OBSERVATIONS**

Liver		Hemorrhage
Lung		Alveolar/Bronchiolar Carcinoma
Ovary		Pigmentation, Nos
Pancreas	Acinus	Atrophy, Focal
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat
Skin	Shaft	Pigmentation, Nos
		Trichoepithelioma

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Accidentally Killed

**HISTO:**

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Intestine Large	Colon	Parasitism
Liver		Congestion, Acute
	Centrilobular	Degeneration, Lipoid
Lung		Alveolar/Bronchiolar Adenoma
Pancreas	Acinus	Atrophy, Focal
Salivary gland		Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_047

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

**SEX:** Female  
**DISP:** Accidentally Killed

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

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**OBSERVATIONS**

Brain		Mineralization
Kidney	Cortex	Nephropathy
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Skin	Shaft	Pigmentation, Nos
Spleen	Red Pulp	Congestion, Acute
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Accidentally Killed

**HISTO:**

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Liver		Congestion, Acute
Lung		Congestion, Acute
	Bronchiole	Foreign Body, Vegetable
	Alveoli	Histiocytosis
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Thymus	Medulla	Hyperplasia, Lymphoid
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_049

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

**SEX:** Female  
**DISP:** Accidentally Killed

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

---

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Liver		Congestion, Acute
Lung		Histiocytosis
Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 1\_050

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

**SEX:** Female  
**DISP:** Accidentally Killed

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

---

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Kidney	Cortex	Nephropathy
Lung		Hemorrhage
Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Thyroid	Follicle	Atrophy, Diffuse
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_001

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Brain		Mineralization
Kidney	Cortex	Nephropathy
Liver		Hematopoiesis
Pancreas	Acinus	Atrophy, Focal
		Hyperplasia, Lymphoid
Salivary gland		Atrophy, Serous
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_002

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

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

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

---

**OBSERVATIONS**

Brain  
Ovary  
Salivary gland  
Uterus

Endometrium

Mineralization  
Cyst, Nos  
Atrophy, Serous  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_003

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Lung		Alveolar/Bronchiolar Carcinoma
		Histiocytosis
		Hyperplasia, Lymphoid
Lymph node		Hyperplasia, Lymphoid
Ovary		Papillary Cystadenocarcinoma Nos
Pancreas	Acinus	Atrophy, Focal
Unspecified	Thoracic Cavity Nos	Alveolar/Bronchiolar Carcinoma, Metastatic
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_004

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

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

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

---

**OBSERVATIONS**

Lung	Pleural Mesothelium	Inflammation, Acute/Chronic
Ovary		Hyperplasia, Cystic
Pancreas	Acinus	Atrophy, Focal
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat
Spleen	Follicles	Hypoplasia, Lymphoid
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic
		Hyperplasia, Polypoid

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_005

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

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

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

---

**OBSERVATIONS**

Ovary		Cyst, Hemorrhagic
Pancreas	Acinus	Atrophy, Focal
Thymus		Cyst, Nos
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_006

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

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

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

---

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Liver		Hepatocellular Carcinoma
Lung		Congestion, Acute
		Hemorrhage
Salivary gland		Atrophy, Serous
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_007

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

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

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

---

**OBSERVATIONS**

Lung		Alveolar/Bronchiolar Adenoma
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hypoplasia, Lymphoid
Stomach	Mucosa	Inflammation, Acute/Chronic
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_008

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Kidney	Tubule	Degeneration, Granular
Liver	Hepatocytes	Focal Cellular Change
	Hepatocytes	Necrosis, Focal
Skin		Inflammation, Acute/Chronic
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_009

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Liver		Inflammation, Acute/Chronic
Lung		Alveolar/Bronchiolar Carcinoma
Pituitary gland		Adenoma, Nos
Spleen		Hemangiosarcoma
Uterus	Endometrium	Hypoplasia, Nos

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_010

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

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

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

---

**OBSERVATIONS**

Pancreas  
Pituitary gland  
Thyroid  
Uterus

Acinus

Endometrium

Atrophy, Focal  
Hyperplasia, Focal  
Follicular-Cell Adenoma  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_011

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

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

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

---

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Lung		Congestion, Acute
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_012

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

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

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

---

**OBSERVATIONS**

Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Stomach	Mucosa	Acanthosis
Thyroid		Follicular-Cell Adenoma
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_013

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Intestine Large	Colon	Parasitism
Mammary gland		Adenocarcinoma, Nos
Ovary		Hyperplasia, Cystic
Stomach		Ulcer, Nos
Thyroid		Hyperplasia, Follicular Cell
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_014

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Brain		Mineralization
Liver		Inflammation, Acute/Chronic
Lung		Hemorrhage
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_015

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

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

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

---

**OBSERVATIONS**

Bone marrow		Congestion, Acute
Brain		Mineralization
Kidney	Cortex	Nephropathy
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Diffuse
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_016

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

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

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

---

**OBSERVATIONS**

Bone marrow		Congestion, Acute
Brain		Mineralization
Liver		Infarct, Focal
		Thrombus, Organized
Pituitary gland	Intermedia	Adenoma, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_017

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

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

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

---

**OBSERVATIONS**

Lung		Congestion, Acute
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Hyperplasia, Diffuse
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_018

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

**SEX:** Female  
**DISP:** Accidentally Killed

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

---

**OBSERVATIONS**

Esophagus	Periesophageal Tissue	Foreign Body, Nos
	Periesophageal Tissue	Inflammation, Acute Suppurative
Spleen	Red Pulp	Hematopoiesis
Thyroid		Cyst, Embryonal Duct
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_019

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

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

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

---

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Stomach	Forestomach	Hyperplasia, Epithelial
Thyroid		Hyperplasia, Follicular Cell
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_020

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

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

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

---

**OBSERVATIONS**

Pituitary gland

Cyst, Nos

Skin

Hemorrhage

Uterus

Acanthosis

Dilatation, Nos

Endometrium

Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_021

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

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

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

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**OBSERVATIONS**

Adrenal gland		Inflammation, Acute Suppurative
Bone marrow		Congestion, Acute
		Hyperplasia, Diffuse
Liver		Hematopoiesis
Mammary gland		Adenocarcinoma, Nos
Ovary		Cyst, Nos
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_022

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

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

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

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hypertrophy, Focal
Bone marrow		Hyperplasia, Diffuse
Brain		Mineralization
Lung		Congestion, Acute
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Uterus	Endometrium	Dilatation, Nos Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_023

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

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

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

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**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Kidney	Cortex	Nephropathy
Liver	Hepatocytes	Focal Cellular Change
Lymph node		Hyperplasia, Lymphoid
Mammary gland		Fibroadenoma
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Hyperplasia, Diffuse
Stomach		Metaplasia, Squamous
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_024

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

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

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Degeneration, Nos
Bone marrow		Hyperplasia, Focal
Brain		Mineralization
Liver		Inflammation, Acute/Chronic
Lung		Alveolar/Bronchiolar Adenoma
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
	Mediastinal Lymph Node	Hyperplasia, Lymphoid
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Adenoma, Nos
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_025

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

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

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

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**OBSERVATIONS**

Liver	Centrilobular	Necrosis, Diffuse
Lung		Inflammation, Interstitial
Lymph node	Mandibular Lymph Node	Hyperplasia, Lymphoid
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_026

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

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

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

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**OBSERVATIONS**

Intestine Small  
Ovary  
Pancreas  
Uterus

Ileum  
Acinus  
Endometrium

Atrophy, Focal  
Cyst, Nos  
Atrophy, Focal  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_027

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

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

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

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Brain		Mineralization
Kidney	Cortex	Hyperplasia, Lymphoid
Lung		Alveolar/Bronchiolar Carcinoma
		Fibrosarcoma, Metastatic
		Histiocytosis
Ovary		Cyst, Nos
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Unspecified		Fibrosarcoma
Uterus		Dilatation, Nos
		Hemorrhage
	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_028

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

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

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

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**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hypertrophy, Focal
Bone marrow		Atrophy, Focal
Heart	Ventricle	Inflammation, Acute/Chronic
Lung		Congestion, Acute
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_029

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

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

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

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**OBSERVATIONS**

Brain		Mineralization
Liver		Hepatocellular Carcinoma
Lung		Hemorrhage
Pituitary gland		Hypertrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Stomach		Metaplasia, Nos
Uterus	Endometrium	Hyperplasia, Diffuse

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_030

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Ovary		Necrosis, Fat
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Thyroid		Cyst, Nos
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_031

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

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

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

---

**OBSERVATIONS**

Ovary

Pancreas

Salivary gland

Uterus

Acinus

Endometrium

Teratoma, Nos

Atrophy, Focal

Atrophy, Focal

Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_032

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

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

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

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Liver		Inflammation, Acute/Chronic
Lung		Hyperplasia, Lymphoid
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Adenoma, Nos
Thyroid		Hyperplasia, Follicular Cell
Unspecified	Multiple Organs Nos	Lymphoma, Nos-Malignant
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_033

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

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

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

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**OBSERVATIONS**

Brain		Mineralization
Kidney	Cortex	Nephropathy
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Cyst, Nos
Salivary gland		Atrophy, Focal
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_034

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

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

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

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**OBSERVATIONS**

Liver		Inflammation, Acute/Chronic
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_035

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Ovary		Hyperplasia, Lymphoid
Pancreas	Acinus	Atrophy, Focal
Salivary gland		Atrophy, Focal
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Dilatation, Nos Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_036

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

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

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

---

**OBSERVATIONS**

Brain		Mineralization
Liver	Hepatocytes	Dysplasia, Nos Hyperplasia, Nodular
Lung		Alveolar/Bronchiolar Adenoma
Pancreas	Acinus	Atrophy, Focal
Stomach		Inflammation, Acute Suppurative
Thyroid	Follicle	Atrophy, Focal
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_037

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

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

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

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**OBSERVATIONS**

Bone marrow		Hemangiosarcoma
Spleen	Red Pulp	Hemangiosarcoma
	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_038

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

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

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

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**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Lung		Alveolar/Bronchiolar Adenoma
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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:** Terminal Sacrifice

**HISTO:**

**OBSERVATIONS**

Kidney	Cortex	Glomerulonephritis, Membranous
	Cortex	Nephropathy
Lung		Hemorrhage
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Hyperplasia, Focal
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_040

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

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

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

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**OBSERVATIONS**

Pancreas  
Spleen  
Stomach

Acinus  
Follicles

Atrophy, Focal  
Hyperplasia, Lymphoid  
Acanthosis  
Inflammation, With Fibrosis  
Hyperplasia, Cystic

Uterus

Endometrium

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_041

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

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

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

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**OBSERVATIONS**

Adrenal gland	Capsule	Adenoma, Nos
Brain		Mineralization
Intestine Small	Ileum	Atrophy, Pressure
Lung		Hyperplasia, Alveolar Epithelium
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_042

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

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

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

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**OBSERVATIONS**

Heart		Periarteritis
Liver		Hematopoiesis
Spleen	Red Pulp	Hematopoiesis
Thyroid		Periarteritis
Urinary bladder		Periarteritis

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**PRIMARY CAUSE OF DEATH** -

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_043

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

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

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

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**OBSERVATIONS**

Pancreas	Acinus	Atrophy, Focal
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Dilatation, Nos
		Hypoplasia, Nos

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 2\_044

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

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

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

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Brain		Mineralization
Lung		Fibrosarcoma, Metastatic
Lymph node	Mediastinal Lymph Node	Fibrosarcoma, Metastatic
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Reticulum Cell
Unspecified	Leg	Fibrosarcoma
	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_045

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

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

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

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**OBSERVATIONS**

Liver		Hepatocellular Carcinoma
Lung		Hemorrhage
Pituitary gland		Adenoma, Nos
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Uterus		Dilatation, Nos
		Hemorrhage
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**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**

Bone marrow		Hyperplasia, Diffuse
Brain		Mineralization
Liver		Histiocytosis
		Pigmentation, Nos
Ovary		Cyst, Hemorrhagic
		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Hematopoiesis
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 2\_047

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

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

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

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**OBSERVATIONS**

Brain		Mineralization
Intestine Small	Peyers Patch	Hyperplasia, Lymphoid
Ovary		Dilatation, Nos
Pancreas	Acinus	Atrophy, Focal
Thyroid		Follicular-Cell Adenoma
Unspecified	Nose	Hemangiosarcoma
Uterus	Endometrium	Hyperplasia, Diffuse

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_048

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

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

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

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**OBSERVATIONS**

Lung		Congestion, Acute
Ovary		Cyst, Nos
Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_049

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

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

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

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**OBSERVATIONS**

Adrenal gland  
Bone marrow

Unspecified  
Uterus

Multiple Organs Nos

Endometrium

Hemorrhage  
Congestion, Acute  
Hyperplasia, Granulocytic  
Lymphoma, Mixed-Malignant Type  
Dilatation, Nos  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 2\_050

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

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

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

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**OBSERVATIONS**

Kidney	Pelvis	Hyperplasia, Lymphoid
	Cortex	Nephropathy
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Cyst, Nos
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus		Dilatation, Nos
	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_001

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hypertrophy, Focal
Brain		Mineralization
Kidney	Pelvis	Hyperplasia, Lymphoid
Spleen	Red Pulp	Congestion, Acute
	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Diffuse
	Red Pulp	Pigmentation, Nos
Stomach		Acanthosis
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_002

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Liver		Hemorrhage
		Hyperplasia, Lymphoid
Lung		Alveolar/Bronchiolar Adenoma
Lymph node	Mandibular Lymph Node	Hyperplasia, Reticulum Cell
Ovary		Cyst, Nos
Pituitary gland		Hyperplasia, Focal
Salivary gland		Atrophy, Serous
Spleen	Red Pulp	Hematopoiesis
	Red Pulp	Pigmentation, Nos
Thymus	Medulla	Hyperplasia, Focal
Uterus	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_003

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Brain	Meninges	Inflammation, Acute/Chronic Mineralization
Kidney	Cortex	Nephropathy
Skin		Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_004

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Liver		Inflammation, Acute/Chronic
Pituitary gland		Adenoma, Nos
Spleen	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_005

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Adrenal gland	Capsule	Fibrosis, Focal
Bone marrow		Hyperplasia, Granulocytic
Liver		Hematopoiesis
		Thrombus, Organized
Pancreas	Acinus	Atrophy, Diffuse
		Inflammation, Chronic Suppurative
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat
Skin		Abscess, Nos
Uterus	Endometrium	Hyperplasia, Cystic
	Endometrium	Inflammation, Acute Suppurative

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_006

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Lung		Alveolar/Bronchiolar Adenoma
Peritoneum		Necrosis, Fat
Pituitary gland		Hyperplasia, Chromophobe Cell
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_007

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Liver	Hepatocytes	Dysplasia, Nos
Ovary		Cyst, Nos
Thyroid		Cyst, Nos
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_008

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Liver	Inflammation, Acute/Chronic
Ovary	Cyst, Nos

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_009

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Bone marrow  
Liver  
Peritoneum  
Thymus  
Uterus

Endometrium

Hypoplasia, Nos  
Inflammation, Acute/Chronic  
Necrosis, Fat  
Hemorrhage  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_010

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Liver	Hepatocytes	Necrosis, Coagulative
Lung		Alveolar/Bronchiolar Adenoma
Lymph node	Renal Lymph Node	Hyperplasia, Lymphoid
Spleen	Red Pulp	Hematopoiesis
Uterus	Endometrium	Hyperplasia, Cystic
		Inflammation, Acute Suppurative

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_011

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Lung		Hemorrhage
Ovary		Cyst, Nos
Salivary gland	Interstitial Tissue	Inflammation, Acute/Chronic
Spleen	Follicles	Atrophy, Diffuse
Thyroid		Histiocytosis
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_012

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Kidney	Cortex	Nephropathy
Liver		Inflammation, Acute/Chronic
Skin	Shaft	Pigmentation, Nos
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_013

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Liver		Inflammation, Acute/Chronic
Ovary		Cyst, Nos
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_014

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Brain	Meninges	Inflammation, Acute/Chronic
Ovary		Papillary Cystadenoma, Nos
Pancreas	Acinus	Atrophy, Focal
	Interstitialium	Hyperplasia, Lymphoid
Spleen	Follicles	Atrophy, Diffuse
	Red Pulp	Congestion, Acute
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_015

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Liver		Focal Cellular Change
Pancreas	Acinus	Atrophy, Focal
	Interstitial	Hyperplasia, Lymphoid
Pituitary gland		Hyperplasia, Focal
Thyroid		Follicular-Cell Adenoma
Unspecified	Multiple Organs Nos	Lymphoma, Nos-Malignant
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_016

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Brain	Meninges	Inflammation, Acute/Chronic
Liver		Inflammation, Acute/Chronic
Ovary		Hemangioma
		Hemorrhage
Pituitary gland		Cyst, Hemorrhagic
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_017

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Lung		Alveolar/Bronchiolar Carcinoma
Ovary		Cyst, Multiple
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Adenoma, Nos
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type
Urinary bladder		Congestion, Acute
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_018

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Brain		Mineralization
Lung		Hemorrhage
Ovary		Cyst, Nos
Pituitary gland		Hyperplasia, Chromophobe Cell
Spleen	Red Pulp	Hematopoiesis
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_019

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Bone marrow		Hypoplasia, Nos
Intestine Large	Colon	Parasitism
Kidney	Cortex	Inflammation, Acute/Chronic
	Cortex	Nephropathy
Liver		Inflammation, Acute/Chronic
Pituitary gland		Hyperplasia, Chromophobe Cell
Spleen	Red Pulp	Hematopoiesis
Thyroid		Follicular-Cell Adenoma
		Hyperplasia, Follicular Cell
Uterus	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_020

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Kidney	Tubule	Degeneration, Nos Glomerulonephritis, Chronic
Ovary		Cyst, Hemorrhagic
Spleen	Red Pulp	Hematopoiesis
Stomach		Hyperkeratosis
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_021

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Brain		Mineralization
Kidney		Hyperplasia, Lymphoid
Lung		Alveolar/Bronchiolar Adenoma
		Hemorrhage
Lymph node		Hyperplasia, Lymphoid
Spleen	Follicles	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_022

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Ovary  
Uterus

Endometrium

Cyst, Nos  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_023

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Bone marrow		Hyperplasia, Granulocytic
Kidney	Cortex	Nephropathy
Liver	Bile Duct	Hyperplasia, Focal
	Hepatocytes	Necrosis, Ischemic
Lung		Hemorrhage
Ovary		Cyst, Nos
		Inflammation, Acute Suppurative
Pancreas	Acinus	Atrophy, Focal
		Inflammation, Acute/Chronic
Spleen	Red Pulp	Hematopoiesis
Stomach	Fundal Gland	Atrophy, Focal
	Fundal Gland	Edema, Nos
	Fundal Gland	Hyperplasia, Focal
Unspecified	Multiple Organs Nos	Lymphoma, Lymphocytic-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic
		Inflammation, Acute Suppurative

PRIMARY CAUSE OF DEATH

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_024

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Uterus

Endometrium

Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_025

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Liver	Hepatocytes	Dysplasia, Nos
	Hepatocytes	Hemorrhage
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Thyroid		Hyperplasia, Follicular Cell
Uterus	Endometrium	Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_026

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Brain  
Kidney  
Pituitary gland  
Thyroid

Tubule

Mineralization  
Atrophy, Focal  
Cyst, Hemorrhagic  
Hyperplasia, Follicular Cell

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_027

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Kidney		Hyperplasia, Lymphoid
Liver		Inflammation, Acute/Chronic
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Stomach		Acanthosis
		Hyperkeratosis
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_028

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Pituitary gland	Anterior Pituitary	Hyperplasia, Focal
Salivary gland		Atrophy, Focal
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_029

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Kidney		Glomerulonephritis, Membranous
Pituitary gland		Hyperplasia, Focal
Salivary gland		Atrophy, Focal
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_030

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Bone marrow  
Spleen

Follicles  
Red Pulp  
Multiple Organs Nos  
Endometrium

Congestion, Acute  
Atrophy, Diffuse  
Hematopoiesis  
Lymphoma, Nos-Malignant  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_031

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Intestine Large  
Ovary  
Spleen  
  
Unspecified  
Uterus

Colon  
  
Follicles  
Red Pulp  
  
Endometrium  
Endometrium

Parasitism  
Inflammation, Acute Suppurative  
Atrophy, Diffuse  
Hematopoiesis  
Metaplasia, Cartilaginous  
Hyperplasia, Cystic  
Inflammation, Acute Suppurative

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_032

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Bone	Lower Extremity	Osteoma
Brain	Meninges	Hemorrhage
Liver		Inflammation, Acute/Chronic
Pancreas	Islets	Islet-Cell Carcinoma
Uterus	Endometrium	Hyperplasia, Cystic
	Myometrium	Inflammation, Acute/Chronic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_033

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Liver		Hyperplasia, Lymphoid
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_034

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Gall bladder  
Uterus

Endometrium

Hyperplasia, Cystic  
Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_035

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Spleen  
Uterus

Red Pulp  
Endometrium  
Endometrium  
Endometrium

Hematopoiesis  
Hemorrhage  
Hyperplasia, Cystic  
Thrombus, Organized

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_036

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Pancreas  
Pituitary gland  
Thymus  
Uterus

Acinus  
  
Medulla  
Endometrium

Atrophy, Focal  
Hyperplasia, Focal  
Hyperplasia, Lymphoid  
Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_037

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Bone marrow		Hyperplasia, Diffuse
Kidney	Tubule	Mineralization
Liver		Hemorrhage
		Necrosis, Focal
Mammary gland		Adenocarcinoma, Nos
Ovary		Cyst, Hemorrhagic
Pituitary gland		Hyperplasia, Focal
Salivary gland		Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
Ureter		Mineralization
Uterus	Endometrium	Hyperplasia, Cystic

PRIMARY CAUSE OF DEATH

-

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_038

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Brain

Liver

Skin

Uterus

Hepatocytes

Shaft

Endometrium

Mineralization

Necrosis, Ischemic

Pigmentation, Nos

Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_039

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Spleen	Red Pulp
Thyroid	
Unspecified	Multiple Organs Nos
Uterus	Endometrium

Hematopoiesis
Follicular-Cell Adenoma
Hemangiosarcoma
Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_040

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Kidney		Glomerulonephritis, Chronic
	Cortex	Infarct, Healed
Liver	Hepatocytes	Atrophy, Diffuse
Lung		Hemorrhage
Ovary	Follicle	Cyst, Hemorrhagic
Unspecified	Multiple Organs Nos	Lymphoma, Histiocytic-Malignant Type

---

**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_041

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Ovary		Cyst, Multiple
Pancreas	Acinus	Atrophy, Focal
Spleen	Red Pulp	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

-

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**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_042

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Bone marrow  
Brain  
Lymph node  
Uterus

Mandibular Lymph Node  
Endometrium

Hyperplasia, Diffuse  
Mineralization  
Hyperplasia, Plasma Cell  
Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_043

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Brain  
Ovary  
Uterus

Endometrium

Mineralization  
Cyst, Nos  
Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_044

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Bone marrow  
Liver  
Ovary  
Stomach

Cardiac Stomach

Congestion, Acute  
Hepatocellular Carcinoma  
Histiocytosis  
Squamous Cell Papilloma

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_045

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Kidney	Cortex	Nephropathy
Pancreas	Acinus	Atrophy, Focal
Pituitary gland		Cyst, Hemorrhagic
Unspecified	Multiple Organs Nos	Lymphoma, Mixed-Malignant Type
Uterus	Endometrium	Hyperplasia, Cystic

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_046

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Adrenal gland	Cortex Nos	Hypertrophy, Focal
Bone marrow		Hyperplasia, Diffuse
Kidney	Cortex	Nephropathy
Liver		Hematopoiesis
		Inflammation, Acute/Chronic
Lung		Histiocytosis
Ovary		Cyst, Nos
Stomach		Mineralization
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

---

**ANIMAL ID:** 3\_047

**TRT#:** 3  
**DOSE:** 0

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

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

---

**OBSERVATIONS**

Bone marrow  
Lung  
Unspecified

Multiple Organs Nos

Hyperplasia, Diffuse  
Pneumonia, Giant-Cell  
Lymphoma, Nos-Malignant

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**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

**ANIMAL ID:** 3\_048

**TRT#:** 3  
**DOSE:** 0

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

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

**OBSERVATIONS**

Adrenal gland	Capsule	Carcinoma, Nos
Kidney	Cortex	Nephropathy
Liver		Hepatocellular Carcinoma
Lung		Congestion, Acute
Salivary gland		Atrophy, Focal
Spleen	Red Pulp	Hematopoiesis
	Follicles	Hyperplasia, Lymphoid
Uterus	Endometrium	Hyperplasia, Cystic

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C54842  
**Test Type:** Long-Term  
**Route:** Gavage  
**Species/Strain:** Mouse/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
**Test Compound:** Malonaldehyde, sodium salt  
**CAS Number:** 24382-04-5

**Date Report Requested:** 10/26/2014  
**Time Report Requested:** 10:47:14  
**First Dose M/F:** NA / NA  
**Lab:** NA

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**ANIMAL ID:** 3\_049

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Adrenal gland		Pheochromocytoma
Bone marrow		Hyperplasia, Diffuse
Brain		Mineralization
Intestine Small	Peyers Patch	Hyperplasia, Lymphoid
Kidney	Cortex	Nephropathy
Lung		Histiocytosis
Uterus	Endometrium	Hyperplasia, Cystic

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**Lab:** NA

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**ANIMAL ID:** 3\_050

**TRT#:** 3  
**DOSE:** 0

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

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

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**OBSERVATIONS**

Bone marrow		Necrosis, Focal
Brain		Mineralization
Liver		Inflammation, Acute/Chronic
Lung		Hemorrhage
Pituitary gland		Hyperplasia, Focal
Spleen	Follicles	Hyperplasia, Diffuse
Uterus	Endometrium	Endometrial Stromal Polyp Hyperplasia, Cystic

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**PRIMARY CAUSE OF DEATH**

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**\*\* END OF REPORT \*\***